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GREEN SCENE

THE PENNSYLVANIA HORTICULTURAL SOCIETY • Sept./Oct. 1997 \$2.75



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Turning Excess into Tasty Spirits
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Front Cover: Stephen Maciejewski's "Best of Show" Liqueur Collection entry in the 1996 PHS Harvest Show. See story on page 3; additional information on page 5.
photo by Ira Beckoff

Grow with us.

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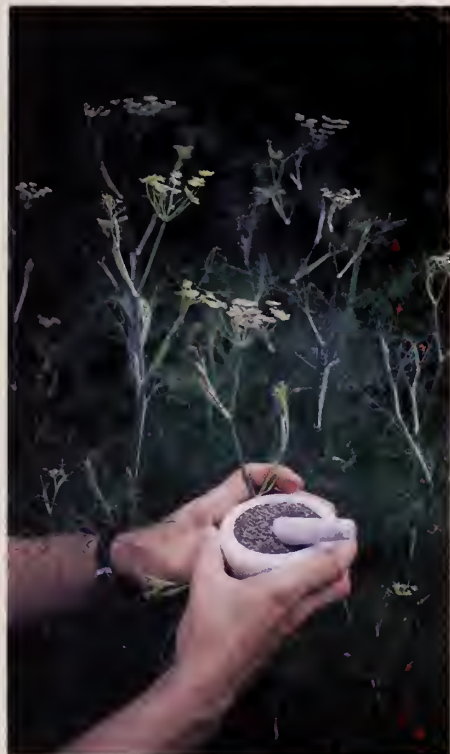


photo by Michael J. LoFurno



The author collects a bountiful crop of raspberries to make cordials.

Turning Excess into Tasty Spirits Using Faith, Hope & Charity

 by Stephen Maciejewski

Excess. We had too much of a good thing and didn't know what to do with it. Our bountiful crop of red raspberries fueled my desire to do something, **something special**. I knew I didn't want to make raspberry preserves. Then I met Faith Cohen, a judge in PHS's City Gardens Contest, who suggested that I try making liqueurs. She promised to mail me a recipe. The postcard arrived (I still treasure it), and I've been surrounded by spirits ever since (see box). By making liqueurs we could have summer whenever we wanted it and give gifts from the garden throughout the year. It was the answer to the call of the seasons.

My first time

There certainly was something very special about that first batch, that virginal experimentation with fruits and spirits. **Pow, Bang, Wow!** This was good stuff and easy to make, too. Equal parts of fresh red raspberries, sugar and gin (see box for recipe), aged in a glass jar for three months certainly captured the essence of summer. The only problem was that I didn't make enough because my gardening partner Michael LoFurno kept putting those red raspberries on his cereal. (Four years have passed now, and we still haven't resolved that eternal question, "Use it now or save it for later?")

A rainbow of flavors

Since our peach tree also produced a lot of fruit, the inevitable happened. What the squirrels don't eat, Michael cans, and then I make a liqueur that even *smells* like summer (see box for Peach Liqueur recipe).

We let our herb fennel (*Foeniculum vulgare*) continue to grow (it's a host plant for butterflies to lay their eggs on) so I decided to make Kümmel when it set seed. A strange, exotic-tasting liqueur that'll make you feel like you're on a flying carpet somewhere in the Middle East (see box).

Soon I branched out and starting using fruits that were not garden grown. I began with bananas, followed the easy instructions and did everything right (see box). But after a week in the steeping jar, my brew looked dreadful. It was brown and had the appearance of sewer water. I was certain that I had somehow contaminated it. It was headed for the drain. Reluctantly, I decided to follow the instructions one step further and strain it through a coffee filter. Was I ever surprised! Clear liquid gold dripped out of the funnel. I couldn't believe that such issue could come from such disgusting-looking stuff. The process really does capture the essence of this tropical fruit.

With confidence I became more adventurous and started working with blueberries, plums, mangoes, pears, oranges, cranberries, papayas, chocolate mint and even vanilla. And there's more to come.

photo by Stephen Maciejewski



Top: Seeds of the herb fennel are collected to make kümmel, a specialty liqueur.

Bottom: Coffee filters are placed in large funnels to strain the fruit or other mixtures.

The basics

Three components are necessary for all liqueurs: alcohol, flavoring, and a sweetener.

Alcohol — Liqueurs require a gin, vodka, rum, grain alcohol or brandy base. The brand name or quality to use depends on who you speak to. People who drink a brand name or who always ask for top shelf tend to insist that only the best booze should be used. My simple sampling of liquor store employees indicates that the brand used does not matter since the flavoring will overpower the taste of the alcohol. Books on cordials recommend that you use the mid-priced stuff.

Flavorings — Fruits, nuts and herbs are steeped in the alcohol to extract their flavor. Whatever is used, make sure it is fresh. Avoid bruised bargain fruits.

Sweeteners — Most recipes call for ordinary granulated sugar. Others use a sugar syrup (see box). A couple suggest the use of honey. Remember, if you use a flavored honey, it will influence the taste of the liqueur.

The process

To get this precious liquid, three steps are necessary: steep, strain, and filter.

Start collecting those large-mouth glass juice jars. You'll need to put your ingredients in them and store the mix from one day up to four months depending on the recipe. This steeping process gives the alcohol its taste. Shop around* for wide canning-type funnels too. Then you'll be able to just pour your chunky fruit into the steeping container.

When your mix is finished aging, you'll have to remove the flavoring agent. If there's a lot of pulp, just pour your mix into a jelly bag. Don't squeeze too tightly or you'll get extra residue, which will make your liqueur murky. If you're using a flavoring, like mint, you can move to the next step and just strain your mix through coffee filters. I use six clear glass bottles and six funnels with either cone-shaped or basket coffee filters. Pour a little mix in each funnel and be prepared to use a number of filters.

Straining and filtering are important, especially if you exhibit. Judges don't like bits of fruit swishing around in the bottle, although many friends do. That homemade look is a real plus in a gift. So make a couple of batches, one for the Harvest Show and another for home use. Using coffee filters will remove any residue and fruit that could cloud your liqueur.

*These can be found in places that sell canning equipment, kitchen supplies, etc.

Recipes

Faith Cohen's Raspberry Liqueur (a la Morleytare)

Use equal parts raspberries, sugar and gin, or 1 1/4 cups raspberries and 3/4 cups sugar and 1 cup gin. Mix in a large-capped glass container and let sit for 3-4 months.

Strain the raspberries out and discard the fruit. Filter the resulting liquid with good quality coffee filters. To hasten the process, use several funnels with filters placed in the neck of several empty jars. As the liquid drains, add more to each funnel and change coffee filters as necessary. Pour the final, clear brew into the liqueur bottles.

Enjoy and play around with the recipe as you like.

Sugar Syrup

An easy 2-to-1 formula. Dissolve 1 cup of sugar into 1/2 cup of boiling water. When this cools, add it to your mix. Yields one cup.

Peach Liqueur

9 small fresh peaches (no pits)
1 1/2 cups sugar
1/2 cup honey
3 cups 80-proof vodka

Peel and cut the peaches into small pieces. Put in a glass jar with vodka. Marinate for one week, shaking jar periodically. Strain and add sugar and honey. Stir well. Leave until clear.
From *Kitchen Cordials**

Kümmel

2 T. caraway seed
3 tsp. fennel seed
1 1/2 tsp. powdered cumin
1 cup sugar syrup
1 fifth 100-proof vodka

Work the caraway and fennel seeds in a mortar with a pestle for a few minutes, or process them with the back of a spoon on a bread board before adding them and the cumin to the vodka. Marinate for one and a half weeks. Then strain out seeds with a wire strainer or clean cloth. Add sugar syrup and your Kümmel is done.
From *Kitchen Cordials**

Banana Liqueur

The tastiest banana will have a bright yellow peel and no discolored areas (indicates a bruise). Bananas should never be refrigerated.

2 medium bananas
1 tsp. vanilla extract
3 cups vodka
1 cup sugar syrup

Mash peeled bananas and add to vodka, cooled sugar syrup, and vanilla. Shake gently and let sit one week. Strain and filter. Let sit longer for additional flavoring, but may be used now. Experiment with cinnamon or nutmeg.

Yield: 1 quart
Container: Wide-mouth quart jar
From *Making Liqueurs for Gifts**

*See book list.

Don't forget to date and label everything. It's also helpful to list the ingredients, especially noting what alcohol base is used. (A gift of gin-based cordial won't be appreciated by a friend who hates gin.) Then mark the bottle with the date when the mix needs to be strained. (Again, the straining depends on the recipe.) Don't rely on memory; mark your desk calendar too.

Presentation

Soon you'll be collecting display and gift bottles, eyeing those flat pint-sized bottles in the blue recycling buckets on the streets of Philadelphia. Ask friends to pass on their empty flasks. Just remember to sterilize them.

If there's no cap, you'll have to purchase a cork. Don't get the cheap ones with the dark imperfections on the sides. They will leak. Cork stoppers come in a variety of grades, look for the smooth ones. Those hinged, porcelain-capped bottles available in kitchen supply stores also work and present well.

Then there are liqueur glasses. If you don't have any, head for the nearest thrift store. They are not a hot item in department stores these days so you'll be in luck. Although, judging from the number of cordial glasses I received last Winter Solstice they could be temporarily out.

I don't have any etchings to show people but I have invited people home to sample



A variety of bottles were chosen to show off the distinctive colors of the cordials in the author's award-winning Liqueur Collection, which includes blueberry, chocolate, mint, peach, banana, pear, crème de mirabelle and raspberry. The Collection won the Bronze Medal for Best in Show in Preserved Products in the 1996 Harvest Show.

my liqueurs. Most people come willingly and are surprisingly quick to offer their opinion. But don't make the mistake of asking someone who hates rum to give you a review of a rum-based cordial. Unexpected company can also cause a bit of a problem. When guests see all the bottles of alcohol in my kitchen, and I see that look on their face, I find myself becoming a little defensive. "It's a hobby . . . just a little excess . . . it's my only flaw" or I tell them "I'm not an alcoholic" and hope they understand.

Too many people ask if it's legal or call me a "bootlegger," then ask if they can purchase some. I guess if you only give it away, Uncle Sam won't care.

Some books for additional information and recipes are listed at the end of this article.

One of the most satisfying moments in

making and giving liqueurs occurred two years ago when I gave my older brother Ed a bottle of my favorite red raspberry liqueur for Winter Solstice. Years of gift-giving paled in comparison to that single bottle. Sipping it on a cold winter's night conjured up pleasurable images of summers passed. He just couldn't get enough and wants the same gift every year now.

My brief encounter with *Faith* and her recipe has led to something very special. I've been able to extend the summer season and give *hope* to friends and family even on the coldest, darkest and shortest day of the year when they sip the essence of summer. In dealing with excess in the garden, I've learned that whatever is good in life is increased and multiplied the more you share it — *charity* at its finest. So pick, steep, strain, filter and bottle up for the future.

Books

Classic Liqueurs, Cheryl Long and Heather Kibbey, Culinary Arts Ltd., Lake Oswego, Oregon, 1990.

Kitchen Cordials, Nancy Crosby and Sue Kenny, Crosby and Baker Books, West Port, Massachusetts, 1992.

Making Liqueurs for Gifts, Mimi Freid, Storey Communications, Inc., Pownal, Vermont, 1988.

The Pennsylvania Horticultural Society's Harvest Show Renaissance Harvest

When:

Saturday and Sunday,
September 13 and 14,
10 a.m. to 5 p.m.

Where:

Fairmount Park
Horticulture Center

The 1997 Harvest Show celebrates the spirit of the 14th through 17th centuries and salutes its artists, poets, explorers and philosophers; its cottages, castles, and châteaux; and its royal and rustic gardeners.

At the Show, suburban and city gardeners compete for ribbons with the bounty of the summer growing season: scrumptious jellies, tangy herb vinegars, homemade baked goods, fresh-picked flowers and vegetables, and shapely branches. Harvest games and crafts for children are among the many activities for visitors to the Show during this fabulous fall weekend.

To enter exhibits:

Contact the Pennsylvania Horticultural Society to request an *Exhibitor's Guide*. Phone: 215-988-8800; Fax: 215-988-8810.

Stephen Maciejewski is a city gardener who has exhibited with Michael LoFurno in the Harvest Show for a number of years. His liqueur collection was awarded the Bronze Ribbon for "best of the blues" in the Preserved Products section in 1996.

A Harvest of Books for Autumn Reading

by Richard L. Bitner

I am baffled every June when newspapers and magazines present the "Summer Reading Recommendations" and include a long list of books on gardening. No gardener I know has time to do any reading during the summer. Thus the CountrySide's recommended reading list is offered during a less demanding period in the garden with the shortening of days and the opportunity of spending evenings making plans for next year.



Blue Jelly — Love lost and the lessons of canning

Throughout the 10 years I was chair of the Preserved Products section of the Pennsylvania Horticultural Society's Harvest Show I was impressed by the wonderful jellies and pickles that exhibitors entered for judging. The jellies were so clear and the dilly beans so closely packed. I wondered what motivated such attention to detail. Now I know what led one person to canning: recovery from depression following her failed love affair. Debby Bull, a rock critic, editor and writer for *Rolling Stone* magazine, wrote her wonderful book *Blue Jelly* after finding some huckleberries her ex-boyfriend left in her freezer and instead of throwing them out she made jam. "Something turned out right, and I took it as a harbinger of my whole future life."

This gem of a book contains 16 short chapters, each with a canning recipe, describing her adventures as she dealt with the heartaches of relationships. Everyone will enjoy this book who has felt some part of their life spin out of control. The canning directions, which include instructions for making crab apple jelly, dandelion jelly,

plum jam, red pepper jelly and others are clearly written and exacting and will guarantee success even for someone who has never canned before. The detailed directions are interspersed with self-help advice such as "This is the part where you have to concentrate. You could wreck everything, or you could turn your whole life around" and "Drain in a wet jelly bag for at least six hours or overnight. Don't squeeze the jelly bag to extract the juice. Don't force things."

The book includes an appendix that contains everything you need to know about canning safely. It is excellent. The only quibble I have is that she condones the use of paraffin wax sealing for odd-shaped jars, which is not considered safe by the extension service and is not acceptable for entries in the Preserved Products section of the Harvest Show. I was also surprised that she never mentioned that the empty jars can be easily sterilized in a dishwasher rather than a boiling water bath.

This book is a perfect gift book as well as a recipe source for a possible blue-ribbon entry at the Harvest Show.*

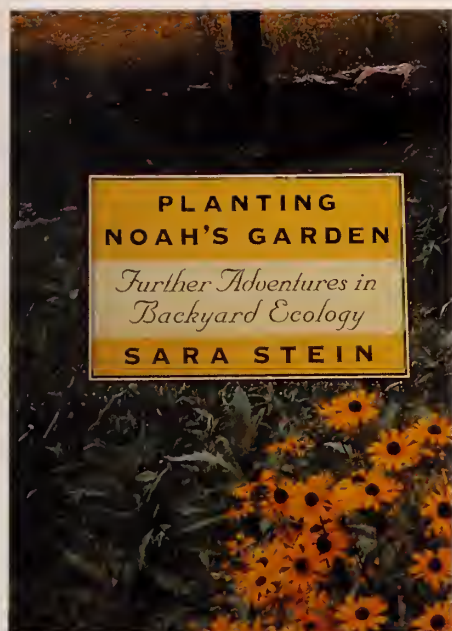
From *Blue Jelly* by Debby Bull

Canning is a whole world of a thing to do. It requires that you get out of your head. It's a Zen thing. You cannot be wondering about your inadequacies and how they drove Bob off and be making jelly. You have to be in the moment, paying attention. You become a person in a world in which things turn out the way you thought they would.

And there it was, suddenly and quickly, out of nowhere, that feeling I'd almost forgotten, when someone's heart opens to let you in. I know that I wouldn't be canning again for a while, but I had absorbed in every cell the lesson of jelly: if you are patient enough, it always turns out.

*For information on the 1997 Harvest Show see page 5.





Planting Noah's Garden Further Adventures in Backyard Ecology

Fans of Sara Stein's (and there are many) earlier books *My Weeds* and *Noah's Garden* will be pleased that this doyenne of ecological gardening has a new offering: *Planting Noah's Garden Further Adventures in Backyard Ecology*.

This substantial book, beautifully illustrated by the author, is in two sections. The first, *The Further Adventures of a Gardener-Ecologist* is a series of essays and the second, *How to Plant Noah's Garden*, a handbook of detailed directions on planning, constructing and managing more ecologically inviting landscapes.

Skip Part I; I did not enjoy that section. Make no mistake — no enlightened gardener will oppose her message of undoing traditional landscaping practices and restoring backyard ecosystems, but reading the first 259 pages of this book was an effort — like talking on the phone with someone you can't shut up. You agree completely with what the person is saying but wish they'd spare you the endless details. Points are often lost in the wordiness. The scientifically trained part of me was disturbed by her repeatedly making statements that I thought deserved documentation with a footnote or bibliography. The book has neither. The Index gives an impression of being excellent but is somewhat erratic. For example, if you remember reading about the endangered species *Bouteloua curtipendula*, you won't find it again under either the common or Latin name in the Index, but under grasses, whereas other plants in the same paragraph

are indexed under their common names. And one wonders why Latin names are italicized in the Index but not in the text.

End of quibbles. Part Two of the book is wonderful. It should be published separately in paperback and accessible to everyone. It is full of all the how-to's and be-careful-about's that usually take years of gardening experience (and failures) to learn. You'll never have to call your know-it-all cousin Jerry to ask about anything again. Stein discusses everything from starting and planning a garden-landscape to collecting and growing seeds, creating wetlands, improving woodlands, and managing grasslands. In this section of the book her mind for details is rewarding. There is one glaring and confusing error, however. Her numerous charts (e.g., Fruit Trees and Shrubs for Bird Hedgerows) refer to hardiness *zone* and vegetation *region* by number, but the two-page vegetation map labels the colored regions 'zones.' The charts are packed with helpful information, though I disagree with her describing *Matteuccia struthiopteris*, the ostrich fern, as a clumper.

The text of Part Two includes numerous recommendations of reference books and nature guides. I was pleased to see her endorsement of Gary Hightshoe's *Native Trees, Shrubs, and Vines for Urban and Rural North America* (Van Nostrand Reinhold, NY, 1988), an indispensable book in too few home libraries, and her insistence that everyone have a copy of Norman Deno's *Seed Germination Theory and Practice* (available through Norman C. Deno, 139 Lenor Drive, State College, PA 16801, \$20). The discussions are wide-ranging and practical: "How to move a heavy stone" "How to build a bird house" "How to build small bogs." Her six-page discussions (pp. 370-375) on the safe use of the herbicide glyphosate (Roundup™) is required reading for anyone using this product.

From *Planting Noah's Garden* by Sara Stein

You have only to compare a perennial border to a meadow to see that pollinating insects don't agree with us on which is the more attractive. Birds don't see our art our way. They don't find topiary as homey as a thicket. Of all the lovely settings that I was shown by garden clubs, few were animated by the songbirds and butterflies that together are the arbiters of ecological taste.

Part Two of the book is wonderful. It should be published separately in paperback and accessible to everyone. It is full of all the how-to's and be-careful-about's that usually take years of gardening experience (and failures) to learn.

The Work of Nature How the Diversity of Life Sustains Us

There are pages of documentation and footnotes in the important new book of Yvonne Baskin, *The Work of Nature How the Diversity of Life Sustains Us*. It was a project of the Scientific Committee on Problems of the Environment and discusses the ecological shifts occurring on a global level that Sara Stein is teaching us to face up to in our own backyards.

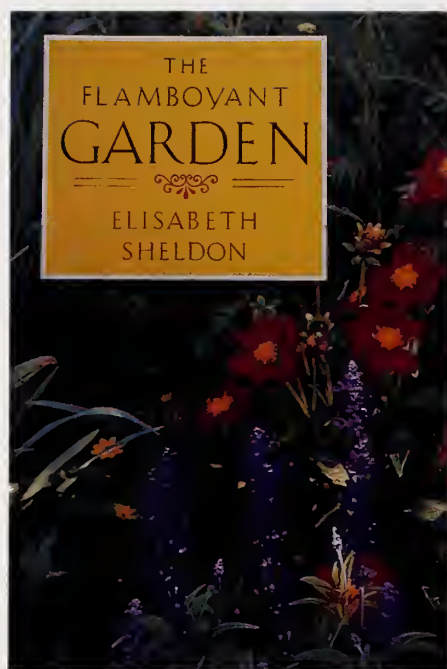
This very accessible though highly technical book summarizes many scientific surveys and investigations on the changes humans have caused in the stability of natural communities and processes. There is a discussion of keystone species which when eliminated changes the character of a community and functioning of an ecosystem including a thought-provoking argument on how beavers have influenced our landscape as well as the role of moose and fire.

Baskin discusses the causes of degradation of our rivers and lakes, and presents an analysis of the problems occurring as our deciduous forests are replaced by conifers. There is engaging documentation on how plant diversity affects our atmosphere and the problems of global warming. This book, like the pivotal 1989 book *The End of Nature* by Bill McKibben (Random House, New York) is a call to action to stop plundering our natural systems.

From *The Work of Nature How the Diversity of Life Sustains Us* by Yvonne Baskin

The biggest threats to the diversity of life on the earth are habitat loss, introduction of alien species into communities, and fragmentation of natural areas caused by bulldozing, paving, plowing, draining, dredging, trawling, dynamiting, and damming. Humans are also plundering natural communities by over harvesting, overgrazing, dousing them with excessive pesticides and herbicides, raining acids and other pollutants onto them, altering the mix of gases in the air, and even thinning the ultraviolet radiation shield on which terrestrial life depends.

A Harvest of Books for Autumn Reading



The Flamboyant Garden

Remembering how much I admired Elisabeth Sheldon's modest earlier book of essays, *A Proper Garden On Perennials in the Border* (Stackpole Books, Harrisburg, 1989), I looked forward to her new book *The Flamboyant Garden*. I was not disappointed. She advises us to do what many have intuitively done for years: ignore those British garden writers' reluctance to use flaming colors. It's now OK to like, even feature, orange, red, strong yellows and (gasp!) magenta! "Tea was all very well, but more and more I craved brandy," Sheldon says of her garden.

Her conversational style is so convincing you find yourself running out to buy *Zinnia* 'Torch', *Gaillardia* 'Red Plume' or *Rosa* × *kordesii* 'Dortmund'. The saturated photographs of Dency Kane are seductive. I love opinionated writers like Sheldon. But she is never closed-minded ("I put *Salvia* 'Laser Purple' in the new garden one year, and it wasn't a great success. But try it; you might do better with it than I did. . . . A plant that has performed badly for me may do very well for you, and vice versa.") Her discussion of purple foliage can change your thinking, and your border. This book is must reading for any perennial grower who is willing to rebel against the dogma of Gertrude, Rosemary and Penelope. The index is excellent.

From *The Flamboyant Garden* by Elisabeth Sheldon

Times have changed, and with them our ideas of what is permissible in the use of color.

Now here I am happily growing all the plants I sneered at and am even gazing fondly at the annual *Gaillardia pulchella* 'Red Plume' and feeling grateful to its breeder. From a low clump come endlessly, six- to eight-inch stems bearing wonderful explosions of claret red. I've sold out — we all have our price.



A Book of Salvias

For rich reds and intense blues in our borders, nothing beats salvias and new ones seem to be appearing all the time. Gardeners looking for specialty books often turn to Timber Press. When I saw their new release *A Book of Salvias: Sages for Every Garden* by Betsy Clebsch I immediately thought of Marilyn Daly who teaches *Annuals at Longwood Gardens* and admits to having trial-grown 84 different salvias one year. I considered the book comprehensive in its discussion of salvias (in dictionary format) and particularly appreciated the sections on where to see and buy salvias as well as the useful cultural lists of cold tolerance, shade tolerance, salvias for containers, and the like.

I was, however, disappointed by the photographs and Marilyn Daly agreed:

"The photographs are not 'pretty,' although I'll admit many salvias are not especially photogenic. The photos should, at least, show the plant's qualities and/or characteristics. In many cases it is not clear which plant is the *salvia*." We both thought the botanical drawings by Carol D. Barner used to illustrate some of the salvias were superb. Marilyn also noted her experiences with certain species differs with the authors, e.g., *Salvia gregii* does not like full sun, but prefers some afternoon protection. I was frustrated to find the growing zone buried in the discussion of each *salvia*. Nevertheless for anyone interested in this genus, this thoroughly researched book will no doubt become a standard reference.



Moss Gardening including Lichens, Liverworts, and Other Miniatures

Another intriguing new release from Timber Press is *Moss Gardening including Lichens, Liverworts, and Other Miniatures* by George Schenk. Everyone will recognize this author from his book on *Shade Gardening* that has become a standard. The dry, perceptive wit that made the earlier book so entertaining as well as informative is even more welcome in this book, which under the pen of a less gifted writer (and less experienced gardener) would have been a deadly boring botany syllabus. The photographs are exceptional and, unexpected in publishing these days, coordinated with text on the same page. You will want to devote your gardening life to growing moss after reading this book, whether in a container under a bonsai or in your entire backyard.

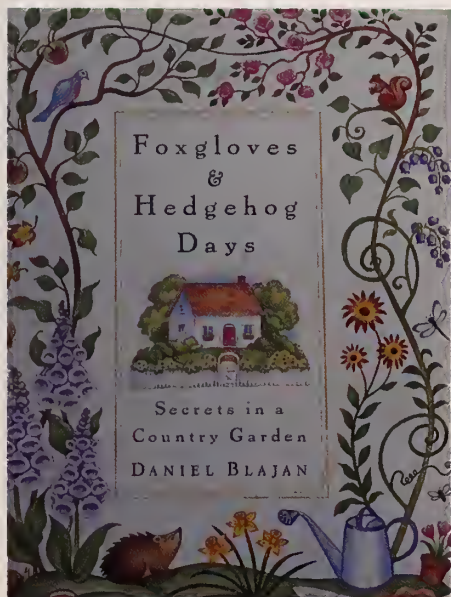
From Moss Gardening
by George Schenk

I personally find that while moss certainly requires care, the job seems to give back more than does the relentless routine of lawn upkeep. The work of moss gardening has an elitist quality that I must admit I find appealing. Every John and Jane grows grass. Only Nature's chosen grow moss.

Wherever moss makes an earnest bid for some piece of garden ground in which grass just does not want to carry on no matter how much it is pampered, there, with great good sense, the gardener might pluck out the wan remnants of grass and greet the moss as friend.

Taylor's Guide to Ornamental Grasses

One can always rely on the Taylor's Guides. This reasonably priced series is now available in over two dozen subjects ranging from Annuals to Orchids to Water-saving gardening. The latest, *Taylor's Guide to Ornamental Grasses*, offers not only the usual format of photographs and descriptions in a book size easy to carry along to the nursery or client, but informative essays on gardening with grasses and design advice on combining grasses with shrubs. (Finally, since borders or ornamental grasses alone have become a cliché). Lists such as "Fine Specimen Grasses," "Grasses to avoid in a border," and "Grasses for shade" help the reader sort out their best choices among these wonderful plants.



Foxgloves & Hedgehog Days
Secrets in a Country Garden

Ah, but one must have a bit of light reading for bedtime. Sometimes cruise ship officer and Netherlander Daniel Blajan's tiny book of essays *Foxgloves & Hedgehog Days: Secrets in a Country Garden* is just the thing. Meant for pure amusement and requiring no note-taking, his yarn of the Daffodil Debacle and tales of the First Mouse War and Country Callers deserve to be read aloud. Each essay from this city dweller turned country gentleman is a jewel.

From Foxgloves & Hedgehog Days
by Daniel Blajan

Nature always has an appointment with me. Her children honor me by calling on me in my own home. And in this age of stress and ever-increasing violence, there is a lot of healing and peace in their calls.

Michael A. Dirr's Manual of Woody Plants 4th edition is the most widely adopted teaching and reference text in horticulture and has sold over 150,000 copies.

CD-ROM:

PLANTAMERICA™ Michael A. Dirr's *Photo-Library of Woody Landscape Plants* Volume 1 of The Distinguished Authors' Series, Photo-Library SourceBook 4 disks www.plantamerica.com — \$149.95.

Sara Stein says in her essay that computers are "revolutionizing the way we gain information." One need only spend five minutes with this Volume 1 of a proposed series from PlantAmerica™ Multimedia Resources for Horticulture & Design to realize she does not overstate the case. A staggeringly large amount of photographic information can be stored on CD-ROM because of digital compression, and can be displayed at will on the computer screen. Michael A. Dirr's *Manual of Woody Plants* 4th edition is the most widely adopted teaching and reference text in horticulture and has sold over 150,000 copies. He has received countless awards (including the Arthur Hoyt Scott Garden and Horticulture Award from Swarthmore College in 1993) and his trainees have influenced the field all over the country. Everyone who has used this indispensable manual knows that it has wonderful line drawings of buds and leaves but no pictures. Now a "Photo-Library" of 7,600 pictures selected from Dr. Dirr's 80,000 slide collection has been

Sampling of Websites of interest to gardeners

American Conifer Society	http://www.pacificrim.net/~bydesign/ACS.html
American Horticultural Society	http://eMall.com/ahs/ahs.html
Australian National Botanic Gardens	http://osprey.erin.gov.au:80/anbg.html
Botany Databases	gopher://smithson.si.edu
Garden Gate	http://www.prairienet.org/garden-gate/
Gardening Hotline	http://www.deltanet.com/allstar/garden.htm
Gardening List WWW	http://www.cog.brown.edu:80/gardening/
GardenNet	http://www.trine.com/GardenNet/
Garden Spider's Web	http://www.gardenweb.com/spdrsweb/
Hortus	http://www.kc3ltd.co.uk/business/hortus.html
Longwood Gardens	www.longwoodgardens.org
Master Gardener	http://leviathan.tamu.edu:70/1s/mg
North Carolina Cooperative Extension Services'	
Horticulture Information Leaflets	http://gopher.ces.ncsu.edu
Pennsylvania Horticultural Society	http://www.libertynet.org/~phs
PHS Flower Show	http://www.libertynet.org/~flowersho/
University of Delaware Botanical Garden	http://bluehen.ags.udel.edu/grounds.html
Yahoo:Recreation:Home and Garden:Gardening	
	http://www.yahoo.com/Recreation/Home and Garden/Gardening/

A Harvest of Books for Autumn Reading

A Note About Computers

Sara Stein

The old way to accumulate written knowledge is to keep a notebook. The new way is to maintain a computer database. The old way takes a lot of work and is difficult to find (where is that note on wild petunias?). The new way is just as tedious to assemble, but the information is instantly accessible. Using the database software FileMaker Pro (Claris Corporation), for example, you can enter a species under its botanical and common name and create fields for any other attributes you wish: height, color, period of bloom, habitat, community, culture, importance to wildlife, or where you saw it growing, where you planted it, or from which growers it is available — or even a scanned image, such as a botanical drawing or your own pressed specimen. You can then perform a search using any of these attributes or any combination of them. A search for *Ruellia humilis* would find the wild petunia. A search for “lavender” “0.5 to 1.5 feet,” and “sandy soil” would find the petunia as well as any other species you entered with the same characteristics, such as purple lovegrass.

It is no exaggeration to say that the Internet is revolutionizing the way we gain information, how fast we can do so, and the scope of information available to untrained researchers. The Internet connects by telephone thousands of computers, worldwide, that are able to communicate with one another through a common system of formatting. You, in turn, can read this immense store of information over your telephone through your computer and a modem. A rapidly increasing portion of the Net, called the World Wide Web, features graphics, sound and video as well as the text that was once the only resource. Internet service providers, including AT&T, offer ways to navigate the Web through easy “gateways,” such as NetScape. You don’t have to know the route to the information you’re seeking or even where it resides (or even necessarily what you’re looking for!): the navigator lets you explore freely.

Here is an example that, in four clicks of the mouse (and without any typing), will take you from a general directory covering broad topics, such as art, education, religion, and science, to a list of the vascular plants of the Baker Wetlands in Kansas. The first click, on the topic “science” in a general directory, takes you to a choice of science disciplines. There, a click on “ecology” takes you to an index of subtopics, such as “Illinois Natural History” or “Great Smoky Mountains Bibliography.” Choosing the less specific “General Biodiversity Related Resources” takes you to a long list of possible “home pages” (title pages that introduce more extensive material), one of which is “Biotic list for the Baker Wetlands in Kansas.” One more click and you’re there.

Already, knowledgeable native plant gardeners are creating their own home pages that link with others’ databases, articles, online newsletters, and groups of like-minded people who exchange information and opinion by e-mail (electronic mail). An example is Pacific Northwest Native Wildlife Gardening, a Web site maintained by a gardener in her spare time. The site provides plant and wildlife data, an extensive bibliography, sources for Pacific Northwest native species, a plant and seed exchange, a subscription to an e-mail discussion group, and links to related organizations. The Net address is <http://chemwww.washington.edu/natives/>. The number of such sites will grow in days to come, as will the number of links among them and the depth of information they provide. In preparation even now are online field guides to native species, with graphics and keys to all plant parts and links to associated plants and wildlife. Don’t toss your reference books yet, but do consider exploring this new research landscape.

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companion version of both pictures and text from Allan M. Armitage on Herbaceous & Perennial Plants.

Books Reviewed in Article

Blue Jelly: Love Lost and the Lessons of Canning, Debby Bull, Hyperion, New York, NY, 1997. \$18.95
ISBN 0-7868-6255-6

**A Book of Salvias: Sages for Every Garden*, Betsy Clebsch, Timber Press, Inc., Portland, OR, 1997. \$29.95
ISBN 0-88192-369-9

**The Flamboyant Garden*, Elisabeth Sheldon, Henry Holt, New York, NY, 1997. \$29.95
ISBN 0-8050-3798-5

**Foxgloves & Hedgehog Days: Secrets in a Country Garden*, Daniel Blajan, Houghton Mifflin, Boston, MA, 1997. \$19.00
ISBN 0-395-85729-5

**Moss Gardening: Including Lichens, Liverworts, and other Miniatures*, George Schenk, Timber Press, Portland, OR, 1997. \$34.95
ISBN 0-88192-370-2

**Planting Noah’s Garden: Further Adventures in Backyard Ecology*, Sara Stein, Houghton Mifflin, Boston, MA, 1997. \$35.00
ISBN 0-395-70960-1

**Taylor’s Guide to Ornamental Grasses*, Roger Homes, Editor, Houghton Mifflin, Boston, MA, 1997. \$19.95
ISBN 0-395-79761-6

The Work of Nature: How the Diversity of Life Sustains Us, Yvonne Baskin, Island Press, Washington, D.C., 1997. \$25.00

CD-Rom

PLANTAMERICA™ Michael A. Dirr’s *Photo-Library of Woody Landscape Plants*, Volume I of The Distinguished Authors’ Series, Photo-Library SourceBook, 4 disks \$149.50
www.plantamerica.com

*Available to members through the PHS Library

Richard L. Bitner, a physician, is also a teaching assistant at Longwood Gardens. He is a frequent contributor to *Green Scene* and gardens in Lancaster County.

released. This 4-CD set contains pictures of over 400 genera, almost 1,500 species and 2,000 cultivars. All images were made with Kodachrome 64.

I had no trouble starting it up with Windows 95 following the directions in the manual. Minimum requirements are an IBM PCC 386 or better with 8MB RAM and at least a double spin CD-ROM drive and 10MB of free space on the hard drive.

The User’s Guide gives clear instructions on using the buttons. Many options are available: • You can view a photo on full screen or compare six pictures at one time, • You could compare leaves and buds of six related species at once, • You can print the pictures in a reduced format with text

added to the page, • With proper projection equipment you can adapt the Photo-Library for classroom lectures.

A garden center could customize their signs with pictures and information. A designer can show pictures of mature plants and seasonal features to a client — much more persuasive than a plant list. There is even a QUIZ button; you can remove the plant name from the screen when showing the image to students. Technical support is available via e-mail. I sent a question to test the system and received a prompt response.

By the end of 1997 this photo-library will be combined with an interactive text version of the new edition of Dirr’s *Manual*. Also to be published later this year is a

What Do the Brits Have . . .



That We Don't?

*Different climate, light, soil?
Does that make them superior? Not on your amsonia.
Go American. You'll have a garden you can live with.*



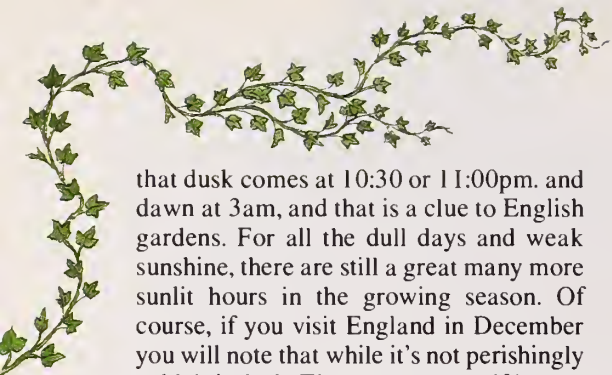
by Jane Reed Lennon

I used to love to do garden consultations. I stopped when the fortieth person told me that what they had in mind was "a nice English garden." I had to clap my hands over my mouth to keep from saying "move to England." What is this American fixation for English gardens? Why does no one say "I'd like a nice American garden; good design, flowers, vegetables, lawns, trees, shrubs, a pool and a place to play?" We share a common language with English gardeners, but really we don't share much else.

Your plot in Montgomery County, Pennsylvania, will never be transformed into

Sissinghurst. Never! Even if your aim is considerably more modest, say duplication of a Kentish cottage garden it still won't happen. You cannot have an English garden anymore than you can have a Florida garden or a desert landscape. The reason is that you are living in the wrong place. Gardens are dependent on climate, light, and soil, gardeners skills, resources and artistic talents are very much secondary to these real parameters.

Take a look at a globe or world map. See where England is? It's very, very far north of us. A visit to England in June brings home the importance of this. You realize



that dusk comes at 10:30 or 11:00pm. and dawn at 3am, and that is a clue to English gardens. For all the dull days and weak sunshine, there are still a great many more sunlit hours in the growing season. Of course, if you visit England in December you will note that while it's not perishingly cold, it is dark. The sun emerges, if it does at all, around 9am, setting at 3pm.

Stuck off the coast of Europe with the North Atlantic and the Irish Sea on one side and the North Sea on the other, Britain is an island and not a very big one. The surrounding waters, and most especially the Gulf Stream, sweeping across the Atlantic and along the west coast of England and Ireland moderate what would otherwise be frigid weather. The combination of warm and cold waters also cause almost constant cloud cover and a rainy dampness. The clouds, currents, and surrounding seas also account for the aqueous air. The watery filter through which we view all things English.

When an Englishman speaks of a hard frost he is talking about a night temperature of 25° or 28°F. There are exceptions of course, times when a wind sweeps across Northern Europe and mud puddles ice over. A real freeze, the type we have for about three months or more each winter, happens once in every 50 years or so in Britain. Then it may last for a few days or a few weeks and is a very big deal. People talk about "the freeze of '68" or some such year. The year the camellia buds froze or their palm tree lost all its fronds. It does get cold, it does freeze but not very cold and not very frozen, compared to the Mid-Atlantic region of North America.

The other end of the temperature problem is heat. Our average summer temperature is about 85°F. Their average summer temperature is 70°F. Brits will speak of a heat wave when the temperature reaches 80°, which for a Baltimorian is blissfully comfortable. Last summer coolish, wetish weather left many of us wondering where summer was. It was a warm approximation of British weather with overtones of tropical rain forest.

I hope the weather and latitude treatise hasn't put you off entirely. It matters a great deal to the plants you grow, even if it fails to interest you. Look at almost any photo of a flower border in an English book. The photo often reveals several flowers that we grow with ease, but those English gardeners manage to have them blooming together. While in our gardens one is over and done before the other blooms. How do they do it? Those clever English gardeners. It's the

I loved the advice of one English sadist who recommended stretching a string net over the whole flower border to support stems growing up through it. Pull one weed, decapitate one square yard of flowers.

weather again, friends. In the long cool summer days under gray watery skies the individual flowers last longer, and buds are slower to open, extending the season of bloom. Anyone who grows daffodils has experienced a spring when temperatures soar and all the darling daffs pop into bloom simultaneously. And in a very short time they are all over; their tender petals dry and crunchy from the unseasonable heat. Imagine all English gardens are in a huge cooler. While your own are growing in your hot sunny backyard.

An *Astilbe* in Pennsylvania blooms for perhaps 10 days in June, the same variety in Manchester, England, blooms for 34 and none of the same days. Hence, the glorious "English garden" combinations, which we cannot duplicate. We can extend the flower season of a genus by selecting and planting early and later varieties of many garden plants, and by deadheading. But this isn't England so don't expect your flowers to perform the way they might in Stoke on Trent.

English gardeners have a broader palette of flowering plants to choose from, not because they are necessarily more clever or because more varieties are offered, but because of the climate, our tender plants aren't tender there. Other plants that thrive in England, alpiners especially, hate our climate. They can tolerate all the cold and snow our weather offers, then when summer comes they "melt." They can't take the heat or the combination of heat and humidity. It's the rule of 150. When you add the degrees (F) of heat and the percent of humidity, if it comes to more than 150, lots of the exotic lovelies from the world's mountain tops just seem to dissolve. A couple days of 90° and 90% humidity is enough to finish off a wide assortment of alpine plants. Forget about *Meconopsis*, plant *Mertensia* instead.

Gardeners, like small children, crave the very things they cannot have and do not care about the things they have. Grow up gardeners! English gardens are in England. That's why they are English gardens.

We North American gardeners provide a huge market for English garden everything: plants, tools, clothes, tours, and books. It is a great deal for the English. They don't have to translate their books to sell them to us, and if an English gardener, no, an

English person wrote it — well, it must be good, after all it is English.

We can all learn a lot from books. Some of my all-time favorite garden books are English, but some of the dumbest, dullest and most useless garden books I've seen are also English. Often an English book will have an "American edition" banner on the cover, an Introduction by some "name author" and a USDA zone map. Otherwise they have nothing whatsoever to do with North American gardens. Buyer Beware! Read a bit before you buy a British book. The plant lists are usually the worst of it. Full of unknown and unavailable varieties. They are unknown and unavailable because they are ungrowable; they die quickly from cold or heat. I know the author doesn't know or care about American readers when I see the word "secateurs." Hey, you Brits, they are clippers this side of the pond.

These books are full of double-digging. Look it up in an English book if you want to know more, along with other things you'll never do. There are plenty of jobs to tell your gardener to do, and they don't mean the crew of guys with two lawn mowers, string trimmer and blower. Tell those guys to "cut out curves along the path, reverse them, then beat them down with a beedle." Yeah! Watch their faces when you tell them to do it! Or do it yourself, the results may be interesting.

I loved the advice of one English sadist who recommended stretching a string net over the whole flower border to support stems growing up through it. Pull one weed, decapitate one square yard of flowers. The English garden books, when they are not instructing you to instruct your gardener are suggesting an arsenal of toxic materials to control any possible pest in a timely and lethal way. We American gardeners are miles and years ahead of our English friends with respect to environmental consciousness.

We Americans can learn a lot from our English counterparts. But gardening is closely linked to geography. North American garden books by North American writers and North American magazines, catalogs and plant lists are sources of locally useful information.

The luxurious full floweriness of English gardens is a style to emulate, not a garden.



Jane Lennon, an Anglophile who worked at Hillier's Nursery in Winchester, England, for a year and a half, now farms and gardens and writes to blow off steam in Berks County, Pennsylvania.



Explore Your Options

Pursue an Education in Horticulture

 by **Lauri Brunton**

photo courtesy of Delaware Valley College



Dr. Neil Vincent, acting dean of Delaware Valley College in Doylestown, Pennsylvania, discusses woody plants with undergraduate students in one of the school's many orchards.

Do names like David Fairchild, Alice Eastwood, Mary G. Henry, John Bartram, and the infamous 'Chinese' Wilson sound familiar to you?

Each was a great plant explorer in his/her own time. Some travelled as far away from their homes as Asia to gather plants; others traversed the American landscape in search of native specimens. What drove them to dedicate their time and in some cases, lives, to discovering, collecting, and learning about the uses of plants from around the world? An inquisitive mind, a dedication to science, a passion for beauty, and a hardy constitution were just some of the essential ingredients needed for such journeys. But equally important was that these legendary explorers each had to begin somewhere, equipped only with a strong desire to learn.

While we are not suggesting you book yourself on the next flight to the outbacks of Australia or the mountains of Asia (although we certainly encourage bold spontaneity if it suits you!), we do invite you to treat yourself to the wonderful opportunities for plant exploration just around

the corner from your home.

Whatever aspects of gardening interest you, there's a place to learn more about them. Formal training may begin as early as ninth grade, at mid-life or at the conclusion of a career. Browse through the following list of undergraduate and graduate programs, certificate courses, workshops, lectures, continuing education, scholarships and internship programs to find the right starting point for you.

The next time you walk by a wall of green, tumbling, undulating honeysuckle, maybe you'll be able to tell your walking partner exactly what it is that makes that fragrant flower so sticky. Enjoy!

University/Degree Programs

Academic/technical study full and part time.

DELAWARE

Longwood Graduate Program

University of Delaware
153 Townsend Hall
Newark, DE 19717-1303
(610) 388-1000

Graduate Programs in Public
Horticulture Administration;
International Gardener Training
Programs; Internships.

University of Delaware College of Agricultural Science

University of Delaware
South College Avenue
Newark, DE 19717
(302) 831-2532

Undergraduate and Graduate: BS, MS.
Bachelor of Science in Agriculture,
Majors in Landscape Horticulture and
Plant Biology.
Master of Science in Plant and Soil
Sciences.

MARYLAND

University of Maryland at College Park

Symons Hall
College Park, MD 20742
(301) 405-2078

Undergraduate and Graduate: BS, MS,
and PhD
Undergraduate: BLA, Landscape
Architecture

Explore Your Options

Undergraduate and Graduate:
Horticulture Science; Horticulture
Production; Landscape Management;
Conservation of Soil, Water and
Environment; Crops; Turf and Urban
Agronomy.

Institute of Applied Agriculture

2123 Jull Hall
University of Maryland
College Park, MD 20742
(301) 405-4686

2-Year Certificate Programs:

Agricultural Business Management;
General Ornamental Horticulture;
Urban Forest Management; Golf Course
Management; Turfgrass Management.

Dundalk Community College

Ornamental Horticulture Technology
Program

7200 Sollers Point Road
Dundalk, MD 21222
(410) 285-9754

Associate of Applied Science in
Horticulture (AAS).

Certificates: Landscape Technology;
Grounds Maintenance Technology;
Greenhouse Management Technology.
Letter of Recognition: Horticulture Plant
Identification.

NEW JERSEY

Rutgers University

Cook College, P.O. Box 231
New Brunswick, NJ 08903-0231
(908) 932-9465

Undergraduate and Graduate Degrees:
BS, MS, PhD

Undergraduate: Environmental and
Agricultural Sciences.

Graduate: Plant Biology, Horticulture and
Plant Technology.

NEW YORK

Cornell University

College of Agriculture and Life Sciences,
Office of Admissions
177 Roberts Hall
Ithaca, NY 14853-5901
(607) 255-2036

Undergraduate degrees in the
Department of Floriculture and
Ornamental Horticulture and
Department of Fruit and Vegetable
Sciences.

Farmingdale State University of New York

Office of Admissions
SUNY Farmingdale
Route 110

Farmingdale, NY 11735-1021
(516) 420-2200

Associate in Applied Science Degree
(AAS): General Horticulture or
Landscape Development; Certificate in
Ornamental Horticulture.

PENNSYLVANIA

Pennsylvania State University

College of Agriculture
Department of Horticulture
101 Ag Administration Building
University Park, PA 16802
(814) 865-7521

Undergraduate and Graduate: BS, MS
and PhD

Undergraduate: Horticulture and
Agriculture-related fields; Certificate
Program in Turfgrass Management;
Associate Degrees in Agricultural
Business, Forest Technology, and
Wildlife Technology.

Graduate: MS, PhD in Horticulture;
M.Ag. (Master of Agriculture); MLA

Temple University, Ambler Campus

580 Meeting House Road
Ambler, PA 19002-3996
(215) 283-1252

Undergraduate Degree: BS in Landscape
Architecture and Horticulture.

Associate Degrees: Landscape
Management, Nursery Management,
Floriculture, Planting Design, and
General Horticulture. Continuing
Education.

Delaware Valley College

700 East Butler Avenue
Doylestown, PA
(215) 345-1500

Undergraduate Degrees: Horticulture,
Ornamental Horticulture, and
Environmental Design.

University of Pennsylvania

Department of Landscape Architecture
Graduate School of Fine Art
119 Meyerson Hall
Philadelphia, PA 19104-6311
(215) 898-6591
Master of Landscape Architecture.

The Williamson Free School of Mechanical Trades

106 S. New Middletown Road
Media, PA 19063-5299
(610) 566-1776
Associate degree in Specialized
Technology in Horticulture,
Landscaping and Turf Management.

Continuing Education Programs

DELAWARE

Winterthur Museum, Garden, and Library

Route 52
Winterthur, DE 19735
(302) 888-4600
Short gardening courses, guided walks,
Horticulture symposium.

MARYLAND

Brookside Gardens

1500 Glenallan Avenue
Wheaton, MD 20902
(301) 929-6504
Lectures, Workshops.

Adkins Arboretum

12610 Eveland Road
P.O. Box 147
Hillsboro, MD 21641
Lectures, Workshops, Seminar.

NEW JERSEY

Rutgers University

Cook College Office of Continuing
Professional Education
P.O. Box 231
New Brunswick, NJ 08903-1231
(908) 932-9271
Short Courses in Landscape Management
and Design; Commercial Horticulture;
Turfgrass Management.

NEW YORK

Brooklyn Botanic Garden

1000 Washington Ave.
Brooklyn, NY 11225-1099
(718) 622-4433 x 223
Short courses in gardening, horticulture,
floral design and landscape design;
Certificate Programs in Horticulture
(focus on Urban Hort.) and Floral Design;
nature walks and day trips to local
horticultural areas of interest.

Planting Fields Arboretum

P.O. Box 58
Oyster Bay, NY 11711
(516) 922-9200
Lectures: internships in ground
maintenance, education, and curation;
spring and fall continuing education
courses; Certificate in Horticulture
Program offered in conjunction with
Long Island University/C.W. Post
Campus.



Catherine Smith, a senior garden guide at Winterthur Museum, Garden and Library, leads visitors on a Guided Garden Walk through the Azalea Woods in May as part of Winterthur's education program.

Queens Botanical Garden

43-50 Main Street
Flushing, NY 11355
(718) 886-3800
Lectures, Symposium.

The New York Botanical Garden

Continuing Education
200th Street and Southern Blvd.
Bronx, NY 10458-5126
(718) 817-8747
NYBG Certificates in Botanical Art and Illustration, Botany, Floral Design, Gardening, Commercial Horticulture, Landscape Design, Horticultural Therapy; Workshops; Special Programs; Intensive Programs; Academic and Professional Programs (Cooperative Programs affiliated with Universities).

Wave Hill

675 W. 252 Street
Bronx, NY 10471-2899
(718) 549-3200
Lecture Series; Gardening Workshops.

PENNSYLVANIA

The Barnes Foundation Arboretum

300 N. Latch's Lane
Merion, PA 19066
(610) 667-0290
Three-year non-credit instruction in Horticulture, Botany, and Landscape Architecture.

Bowman's Hill Wildflower Preserve

Washington Crossing Historic Park
P.O. Box 685
New Hope, PA 18938-0685
(215) 862-2924
Workshops; Lectures: series, short, one-day.

Henry Foundation for Botanical Research

801 Stony Lane
Gladwyn, PA 19035-0007
(610) 525-2037
Workshops, Tours and Lectures.

Historic Bartram's Gardens

54th St. and Lindbergh Blvd.
Philadelphia, PA 19143
(215) 729-1047
Lectures, Workshops.

Longwood Gardens

Continuing Education Courses
P.O. Box 501
Kennett Square, PA 19348
(610) 388-1000 X516
Evening Lectures, Certificate Courses in Ornamental Plants; Continuing Education in Garden Science, Plant Specialties, Art & Design, Floral Design, and Horticultural Activities.

Morris Arboretum of the U. of Penn.

9414 Meadowbrook Avenue
Philadelphia, PA 19118
(215) 247-5777
Continuing Education in Horticulture, Landscape Design, Professional Training for arborists; Internships.

The Pennsylvania Horticultural Society

100 North 20th Street
Philadelphia, PA 19103
(215) 988-8800
Workshops, Lectures, Tours.

Scott Arboretum

500 College Avenue
Swarthmore, PA 19081-1397
(610) 328-8025
Continuing Education, Workshops, Tours; Internships.

Tyler Arboretum

Education Center
515 Painter Road
Lima, PA 19037
(610) 566-9133
Workshops; Field trips.

Other Educational Opportunities

You may wish to apply for a scholarship, fellowship or internship. The American Association of Botanical Gardens and Arboreta and the Garden Club of America are great places to start looking for opportunities.

Internships and Federal Funding

The American Association of Botanical Gardens and Arboreta (AABGA) provides a horticultural internship directory, updated each year. The directory lists internships by state and by position.

The AABGA also produces *Federal Funding for Botanical Gardens*, an excellent compilation of government agencies such as the National Science Foundation, Conservation Assessment Program (CAP), and the National Endowment for the Humanities. It provides information about grants and scholarships in horticulture and related fields including brief descriptions of each agency's mission, and contact information.

- *The 1997 Internship Directory*: \$8.00 members; \$10.00 non-members.
- *Federal Funding for Botanical Gardens*: \$10.00 members; \$12.00 non-members.

To receive your copies of these publications, contact: The American Association of Botanical Gardens and Arboreta (AABGA)
786 Church Road
Wayne, PA 19087
(610) 688-1120
FAX (610) 688-1120

Garden Club of America Scholarships and Fellowships

The Garden Club of America is dedicated to restoring, improving, and protecting our environment through its conservation, horticultural, civic improvement, and educational programs. To receive your own brochure, contact:

Scholarship Committee
The Garden Club of America
598 Madison Avenue
New York, NY 10022
(212) 753-8287
FAX (212) 753-0134
<http://www.interport.net/~gca>

Explore Your Options

Fellowship in Landscape Architecture at the American Academy in Rome

One-year fellowship at the American Academy in Rome. Applicants must hold an accredited degree in Landscape Architecture. Funds one student annually. Application Deadline: November 15 annually.

GCA Interchange Fellowship

A graduate academic year in the U.S. for a Briton and a work-study program for an American at universities and botanical gardens in the U.K. Funds two graduate students annually. Application Deadline: November 15 annually.

GCA Awards for Summer Environmental Studies

Financial aid toward a summer course in environmental studies for college (Soph-Jr-Sr) and graduate students. Annually funds two or more students, usually at \$1,500. Application Deadline: February 15 annually.

Katherine M. Grosscup Scholarships

Financial assistance to college juniors, seniors or graduate students, preferably from OH, PA, WV, MI, and IN. Funds several students annually up to \$2,000 each. Application Deadline: February 15 annually.

GCA Awards in Tropical Botany

Grant to enable field study in tropical botany. Open to Ph.D. candidates. Funds two students annually at \$5,500 each. Application Deadline: December 31 annually.

Catherine H. Beattie Fellowship

Research grant to graduate students through the Center for Plant Conservation. Preference to students whose projects focus on the endangered flora of the Carolinas and Southeastern U.S. Funds one student annually up to \$4,000. Application Deadline: December 31 annually.

Frances M. Peacock Scholarship for Native Bird Habitat

Financial assistance to college seniors and graduate students to study habitat-related issues that will benefit threatened or endangered bird species and lend useful information for land management decisions. Application Deadline: January 15 annually.

Master Gardener Programs

Extension Master Gardeners are members of their local community who take an active interest in their gardens, trees, and shrubs. The qualifications to become an

Extension Master Gardener are simple: you must have an interest in plants and gardening, attend a training program, and provide 60 hours of volunteer service.

Classes in the training program are taught by Cooperative Extension educators and specialists. The Program offers 65 hours of classroom work and 60 hours of supervised in-service training. Subjects include basic botany/plant physiology, plant propagation, plants and the environment, soils, entomology, plant pathology, herbaceous ornamentals, pesticide safety, integrated pest management, lawns, woody ornamentals, vegetable gardening, small fruit culture and tree fruit culture.

In exchange for training, participants are asked to volunteer time to their local Cooperative Extension Program. Types of service vary, from answering garden-related phone calls, staffing plant clinics, county fairs or farmers' markets, to conducting workshops or helping establish and maintain community garden plots.

To learn which office to contact in your state to become a Master Gardener, call or write:

CONNECTICUT

University of Connecticut

Cooperative Extension System
College of Agriculture and
Natural Resources

Plant Science Department
1376 Storrs Road, W.B. Young Bldg.
Storrs, CT 06269
(860) 486-2928

DELAWARE

New Castle County Extension Office
910 S. Chapel Street
University of Delaware
Newark, DE 19716
(302) 831-2506

MARYLAND

Home and Garden Information Center
Maryland Cooperative Extension Service
University of Maryland at College Park
12005 Homewood Road
Ellicott City, MD 21042-1542

NEW JERSEY

Rutgers Cooperative Extension
N.J. Agricultural Experiment Station
Rutgers, The State University of NJ
New Brunswick, NJ
(908) 932-6767

NEW YORK

Cornell Cooperative Extension
Department of Floriculture and



photo by Bridget Salantri

Bowman's Hill Wildflower Preserve's summer intern, Heather Lloyd, enjoys *Magnolia grandiflora* at Historic Bartram's Garden during an Intern Field Trip.

Call Your Area County Extension Office

by Terry Mushovic

I became serious about gardening after I graduated from college (the first time). My apartment windows filled up with cuttings of popular house plants like spider plants, swedish ivy and coleus. As I began to read more about gardening, I kept coming across the phrase "call your county agent for more information." I pictured these gardening experts as paragons of horticultural knowledge. So it was with great trepidation and another degree under my belt that I added that title to my own name.

In my 20 years with the Penn State Urban Gardening Program in Philadelphia, I have been asked lots of unusual questions, looked in books and asked university specialists for the answers and met a lot of wonderful gardeners. I think the most special trait of most county agents I've met is not their knowledge (which is extensive), but their willingness to try and find an answer for their clients. Sometimes the answer is "Throw it out, it's dead," but most of the time, they suggest a remedy.

Every county in the United States has an extension office that is the liaison with the land grant college of that state. Extension's main purpose historically was the transfer of knowledge from the university to the farmers. Agriculture is still Pennsylvania's first industry and this link is still strong. Extensive printed material is available in each office, and some have classes available on a range of topics.

Extension offices provide information to commercial landscapers, as well as to homeowners. Funding issues in many counties have necessitated a reduction of services to homeowners. Highly trained volunteers, Master Gardeners,

have filled the gap. Master Gardeners receive 30+ hours of training in exchange for volunteering time in their community. (See page 16.)

4-H offers extensive youth projects in such areas as forestry, entomology, horticulture and gardening. Soil-testing kits are available to homeowners and landscapers at a modest fee. Some of the counties have newsletters written for homeowners. Most have specialty newsletters for commercial growers like vegetable, nursery or greenhouse growers.

Each county and state has variations in the services they provide. A phone call or visit to your local extension office will let you know what they have to offer. If you have access to computer networks, some of us have web pages and most have electronic mail capacity.

PENNSYLVANIA

Bucks County

Neshaminy Manor Center
Doylestown, PA 18901-2896
(215) 345-3283

Chester County

Government Services Center
601 Westtown Rd., Suite 370
West Chester, PA 19382-4546
(610) 696-3500

Delaware County

Smedley Park
20 Paper Mill Rd.
Springfield, PA 19064-2705
(610) 690-2655

Montgomery County

1015 Bridge Rd., Suite H
Collegeville, PA 19426-1179
(610) 489-4315

W.B. Saul High School of Agricultural Sciences

7100 Henry Avenue
Philadelphia, PA 19128
(215) 487-4467
Retail Floriculture, Greenhouse Management, Landscape Design, Turfgrass Management, Horticulture Mechanics.

Dauphin County Technical School

6001 Locust Lane
Harrisburg, PA 17109
(717) 652-3170
Major in: Ornamental Horticulture.

Camden County Technical Schools

343 Berlin Cross Keys Road
Sicklerville, NJ 08081

Philadelphia County

4601 Market St., 2nd Floor
Philadelphia, PA 19139-4616
(215) 471-2200

DELAWARE — Garden Check Newsletter, 10 issues March to November, \$12 subscription

New Castle County

910 S. Chapel St.
Newark, DE 19716-1303
(302) 831-2506

*Garden line for home gardeners —
(302) 831-8862

Kent County

2319 S. DuPont Highway
Dover, DE 19901
(302) 697-4000

Sussex County

Research & Education Center
RD 6, Box 48
Georgetown, DE 19947
(302) 856-7303

NEW JERSEY

Burlington County

122 High Street
Mount Holly, NJ 08060
(609) 265-5050

Camden County

152 Ohio Avenue
Clementon, NJ 08021
(609) 566-2900

Gloucester County

County Building
Delsea Drive
Clayton, NJ 08312
(609) 863-0110

(609) 767-7000

Ornamental Horticulture: Floriculture and Landscaping.

For similar programs in other states, contact your Department of Education.

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Lauri Brunton, Publications Associate at the Pennsylvania Horticultural Society, edits the *PHS News*. She is a regular contributor to *Dodge City Journal*, where she writes book reviews and articles about city living. She enjoys creating community-style vegetable gardens out of clay pots by her front doorstep in South Philadelphia where neighbors can easily pluck oregano, lavender, thyme and plum tomatoes for a special homegrown taste.

Ornamental Horticulture
20 Plant Science Building
Cornell, NY 14853-5908
(607) 255-1791

PENNSYLVANIA

Penn State University
College of Agricultural Sciences
Cooperative Extension, Montgomery Co.
1015 Bridge Road, Suite H
Collegeville, PA 19426-1179
(610) 489-4315

High Schools

Several high schools offer special horticulture and horticulture-related programs to teenagers.

The Scott Arboretum Plant Sale

Hard-to-find, garden-worthy plants go on sale September 19th and 20th

The sound of drumming awakens me suddenly; I'm shivering and disoriented. As I slowly get my bearings, I remember where I am. I'm sleeping in the middle of the Swarthmore College rugby field and the drumming noise is a heavy rain pounding on the large, circus-like tent above me. And I'm here because tomorrow is the 1995 Plant Sale at the Scott Arboretum and since the setup is complete, someone has to keep watch over the tents, fences, signs and plants — hundreds of mouthwatering plants.

As lightning brightens the sky and thunder booms, the others camping out with me also wake up. The same question has occurred to all of us: Will the rain stop before the sale starts in the morning?

Fortunately, when morning comes, and we're drinking coffee brought by the sale volunteers, the only signs of the rain are well-watered plants and wet grass. Hours before the sale opens, people begin to appear. Donna Edwards, the Sale chair, is one of the first to appear and soon the people volunteering as cashiers, plant experts, helping with the food concession, with traffic control and those helping people get plants to their vehicles all stand ready.

People attending the sale either line up behind the ribbon at the entrance, making sure they have a good place in line, or pace with anticipation just outside the fences, peering at the plants and taking shopping notes. By the time Donna Edwards gathers her scissors to cut the opening ribbon, there are a couple hundred plant-crazed people in line. As the ribbon is cut, and the crowds flood into the sale yard, plant experts leap into action, cashiers stand ready, advance orders are distributed and happy shoppers fill cartloads of plants.

The 1997 Plant Sale

On the 19th and 20th of September, the Associates of the Scott Arboretum will hold their biennial Plant Sale. The major fund raiser for the Arboretum, this event attracts more than 2,000 gardening enthusiasts. The Arboretum's mission is to get good plants to gardeners, so a wide selection of hard-to-find, garden-worthy plants — including trees, shrubs, perennials and vines — will be offered at the sale.

We are especially excited about this year's sale because we're featuring plants named at the Scott Arboretum or propagated from the Arboretum's collections. We have been working with area nursery



The double-flowered dogwood (*Cornus florida* 'Pluribracteata' at Scott Arboretum) is a delight in May when its branches are covered with creamy-white blooms.

photos courtesy of Scott Arboretum

people over the last few years, encouraging them to propagate from the Arboretum's collections in order to make these plants available. The following are just some of the outstanding woody plants we'll be offering; all have been propagated from the Arboretum's collections.

Buddleia davidii 'Potter's Purple', is a selection of butterfly bush found several years ago in the Wister Garden at the Scott Arboretum and named for Gertrude Wister's gardener, and former Arboretum curator, Jack Potter. This shrub is covered in soft purple flower spikes from mid-summer to frost and as the common name suggests, butterflies find these flowers irresistible. Its ultimate size will be about eight feet tall and five feet wide, and it prefers full sun and well-drained soil. This versatile shrub works well in the perennial border combining nicely with daylilies, yarrow or other sun-loving perennials and is also at home in a mixed shrub border.

Cornus florida 'Pluribracteata' is the beautiful "double-flowered" form of our native dogwood. From early to mid-May, the tree is cloaked with hundreds of flowers, each having eight or more creamy-white bracts. Perhaps because of these additional bracts, the tree appears to be in bloom longer than the species. In fall, the foliage of this magnificent small tree takes on reddish-purple hues. The Arboretum's much-admired specimen was planted in 1959 and is approximately 20 feet high and 25 feet wide. This handsome tree could be showcased in a woodland garden and underplanted with shade-loving native

plants like Virginia bluebells (*Mertensia virginica*), columbine (*Aquilegia canadensis*), wood phlox (*Phlox divaricata*) and a variety of ferns but is equally effective used as a specimen tree, standing boldly on its own.

Fagus sylvatica 'Atropunicea' is a majestic tree that stands out in any season. In spring, the golden, pointed buds unfurl into leaves that emerge a golden-purple and mature into a lovely greenish-purple color, which holds throughout the summer. In autumn, these leaves turn a tawny-golden color. During the winter months you can appreciate the fine branching habit and smooth, silver-gray bark of the European beech. These trees are a favorite among visitors to the campus; adults appreciate them for their size and grace and children love the elephant hide-like bark. This tree is not for the small garden, as it can reach over 60 feet in height with a spread of more than 40 feet; it makes an excellent specimen tree for larger properties and parks.

Ilex opaca 'John Wister'. Every garden needs a "workhorse" or two and the American holly, *Ilex opaca* 'John Wister', selected at Scott and named in honor of the Arboretum's first director, provides structure and a powerful evergreen element in the landscape. With its strong, pyramidal habit and dark green leaves, it makes a wonderful 30-foot-tall screen and an effective backdrop for other plants. *I. opaca* 'John Wister' combines readily with other plants with winter interest and makes a perfect canvas for the winter flowers of witch-hazels, the colored stems of red- or yellow-twigged dogwoods or the bright



fruit of winterberry hollies.

Rubus odoratus. Knowledgeable nursery and gardening folks have commented that our *Rubus odoratus* is an outstanding selection, with larger-than-usual clusters of papery, magenta, five-petaled flowers decorating the plant throughout the summer. This ornamental raspberry, which will reach six feet in height and width, is little known in the trade, but with its velvety olive-green leaves, lovely tan exfoliating bark and well-mannered habit, it makes a fine addition to the garden.

Hamamelis mollis 'Early Bright' was introduced by the Scott Arboretum and continues to be a campus favorite. This selection of the Chinese witch-hazel begins to bloom in mid-January — almost a full month before the species. It's fun to watch on mild winter days, as its sweetly scented, golden-yellow strap-like petals unfurl and brighten the landscape. On colder days, the petals curl up and wait for warmer times. A friend once remarked the petals look like New Year's Eve noisemakers as they open and close. This large shrub has handsome green leaves that turn a soft yellow in autumn. Place this witch-hazel where you'll walk by it in winter and where it has room to grow; at maturity it will reach 20 feet in height and width.

Punica granatum. We are pleased that we can share our hardy selection of pomegranate, *Punica granatum*. Though this ancient plant has long been grown by



Scott Arboretum's magnificent purple-leaved beeches (*Eagus sylvatica* 'Atropunicea') are the pride of the campus. Planted over 100 years ago, they have developed into stately giants with notable wrinkled gray bark and wide spreading branches.

gardeners in climates milder than ours, it has frustrated area gardeners. This selection, originally found in an area garden, has thrived in the Summer Border near Old Tarble Hall at the Arboretum since 1990. In summer it produces curious, powder-puff-like bright orange flowers for more than six weeks and will occasionally set small fruit. In our area, *P. granatum* stays shrub-like and will reach only four feet in height. For best results, plant *Punica* in full sun and well-drained soil in a somewhat protected site.

Schizophragma hydrangeoides 'Moonlight'. There are very few plants that work for almost every garden; an exception is *Schizophragma hydrangeoides* 'Moonlight', the Japanese hydrangea vine — and what garden wouldn't benefit by the addition of a beautiful vine? Its heart-shaped leaves have a pewter-colored shine and deep green veins, which make them appear almost variegated. In addition, this vine has flat-headed clusters of creamy-white "hydrangea-like" flowers in mid-summer. While self-clinging, it doesn't cause damage to mortar; it attaches itself to walls, fences or other structures by hair-like rootlets. It is tolerant of sun or shade and will survive in dry situations. I have it at home growing between ours and the neighbor's front steps; the entire planting area is only about one foot long, four inches wide and two feet deep and yet this deciduous vine thrives there. *Schizophragma hydrangeoides* 'Moonlight' will reach 40 feet in height if allowed, but is easy to keep smaller through judicious pruning.

Parthenocissus henryana. A handsome vine that works well in small or city gardens is *Parthenocissus henryana*, the silvertine creeper. Each palmate leaf has five to seven leaflets, velvety green with prominent silver to pinkish veins on top and dusky purple beneath. The fall color on this elegant plant is fiery red to burgundy. The delicate vine will scramble up a trellis, wall or arbor by its tendrils and cup-like holdfasts. The vine's overall texture is light and airy, so it will cover an arbor and provide dappled shade or climb a wall and still let the details of the building be seen. It prefers full sun to part shade and average garden soils.

We're showing through tours and lectures what these and other plants we're offering at the sale can do in the landscape. If you're interested, please join us at the Scott Arboretum for a free guided tour Saturday, September 6 from 10am to noon or for a free illustrated lecture Thursday, September 11 at 7:30pm. And, of course, we hope to see you at the sale.

Kris Benarcik is the Education coordinator at the Scott Arboretum where her duties include organizing horticultural lectures, tours, workshops and trips. She is editor of the Arboretum's quarterly newsletter, *Hybrid*.

Kris and her husband, Dan, are constantly looking for new plants to squeeze into their small urban garden in Wilmington, Delaware.

An Invitation to Plant Societies

SEND US YOUR PLANS FOR 1998

We will publish information about one major plant sale and one major event for each area plant society based in the Delaware Valley from March 1, 1998 through December 1998. Send the information to Erin Fournier (*Green Scene*, 100 N. 20th St., Phila., PA 19103-1495.) **Deadline: Oct. 20, 1997.** Please use the following format:

NAME OF CHAPTER AND SOCIETY: _____

	Event #1 — Major Event	Event #2 — Plant Sale
Name of Event	_____	_____
Dates	_____	_____
Time	_____	_____
Location	_____	_____
(full address)	_____	_____
Fee, if any	_____	_____
Contact person	_____	_____
Address	_____	_____
Phone Number	_____	_____



Geoffrey Kaiser sticks plants in anywhere he can, and sometimes is surprised by how well things do. Here, *Silene pensylvanica* grows in a crack on the side of a boulder.

GARDENING THE WOODS

The challenges of weeding, pruning and planting on 22 acres



by Adam Levine

The southeastern Pennsylvania woodland owned by Bruce Grimes and Geoffrey Kaiser is the kind of property many people dream about. Their house hangs on the edge of a deep glen, the deck overlooking a simple bridge and a waterfall in the creek below. Beyond the bridge is a shady hemlock grove; further along one finds a pond, a marshy meadow and a dry meadow. Boulders, some as big as small houses, are dropped here and there, their flanks covered with moss and lichens and their tops home to colonies of ferns and wildflowers. Hundreds of species of flowering shrubs, trees and herbaceous plants turn the 22-acre property into a spring woodland and make it lovely in any season.

At first glance these woods seem so natural, so right, that you can be fooled into thinking that all the two men have done is make the property accessible with a network of well-worn paths.

But on closer inspection, you might notice the hybrid rhododendrons planted among the natives, or the chicken-wire enclosures used to protect plants from hungry deer, or the utter lack of invasive weeds so common in woods nearby. And if a visitor asks, Kaiser and Grimes will readily admit to planting some of those boulder-top flowers, removing more than a thousand trees, diverting the creek with concrete to make the waterfall they love to hear from the deck, as well as weeding, pruning, fertilizing and selectively spraying the plants in what they sometimes call their "garden."

The two gardeners don't agree on everything. Kaiser often favors flowers over wildlife, while Grimes favors most forms of wildlife no matter what flowers they eat. Over the years Grimes has come to appreciate native plants and would prefer to plant nothing else, while Kaiser still lusts after pretty foreigners and hybrids.

But if they occasionally work at cross purposes, what counts is the results. Unlike many similar projects, where the woods may be primped and preened to the point of

sterility, these men have worked their land with a sensitivity and gentleness that has kept it fully alive.

In the beginning . . .

Grimes and Kaiser purchased their property in 1977, after falling in love with its "bones" — the dramatic glen, the spring-fed creek, the stately hemlocks that, along with other old trees such as tulip poplars (*Liriodendron tulipifera*) and oaks (*Quercus* spp.), had grown up since the property was last logged in 1915. But those beautiful features were obscured by an excess of greenery — too many smaller trees competing for the light, and a tangled understory thicket that rose 15 feet high in places.

In the beginning, their discerning gentle touch had to wait. Large-scale pruning was the order of the day.

They had no plan at the outset; their ideas, Kaiser says, simply unfolded over time. "A flat property would have been easy to lay out on paper, but this is a glen, and with the underbrush so high it was really hard to plan. It had to be cut over. What we liked, we left and nurtured."

Working outward from the house, they began cutting to the ground most of the understory, primarily witch hazel (*Hamelis virginiana*), spicebush (*Lindera benzoin*) and several *Viburnum* species. As they cut, they searched for desirable species to preserve, among them mountain laurel (*Kalmia latifolia*), dogwood (*Cornus florida*) and redbud (*Cercis canadensis*), all of which abound on the property.

They also discovered a grove of pinxter-bloom azaleas (*Rhododendron periclymenoides*), stunted by borers and nibbling deer, which provides an example of how one gardening partner can temper the extremes of the other, ultimately benefiting the garden.

Kaiser originally thought these azaleas "looked like dumb honeysuckle bushes that dropped their flowers after a day." Instead of coddling them back into health he might have let the deer keep on nibbling,

if Grimes hadn't liked the plants so much. The pinxters now cover about an acre of woods near the house, with springtime blooms ranging from white to pink to lavender. Like many plants in their woods, these benefit from occasional applications of a granular acid fertilizer — applied, of course, by Kaiser, their original detractor.

On the other hand, Kaiser grew to love *Viburnum prunifolium* as a child, while similarly "gardening" a patch of woods on his parents' nearby property. But Grimes nicknamed it "stinkbush" because the wood gave off a bad odor when it was cut, and he hacked most of it down.

"I didn't know what it was, and since I didn't have a name for it, I didn't respect it," Grimes recalls. "Then I learned the name, and that it had food value for wildlife."

Fortunately, Kaiser had insisted that Grimes leave some of the plants, and others that had been cut were allowed to grow back up.

"It's one of the advantages of cutting rather than killing," Kaiser says. "By simply cutting things to the ground, I'm just tilting the balance against things that are too common in favor of others I prefer. It also means I can change my mind."

Let there be light

After thinning the overgrowth of underbrush, the next step for Grimes and Kaiser was to thin out the canopy. In 1977 they brought in a forester who marked 200 trees for removal. "We sent him to six acres in the far corner of the property," Grimes recalled. "That way if we didn't like the result we never had to go back there again."

Fortunately, besides providing many cords of firewood and the lumber used to build their barn, they also liked the leaner look of the thinned-out woods. Over the next several years they brought the forester back two more times, to mark two other six-acre sections; all told, they removed about 600 trees.

"The forester showed us that thinning is a way to speed up the growth of the trees



Geoffrey Kaiser and Bruce Grimes use a variety of methods to keep deer out of their glen, which allows them to grow rhododendrons in that part of the property with little trouble.

left behind, to propel the whole woods toward a more mature feeling," Kaiser says. "After the trees on the property were logged off in 1915, the woods had grown up like a carrot patch, and like a carrot patch, if you leave all the seedlings you never get any decent carrots. They all come up crowded and stunted."

Grimes continues selectively to thin the woods, cutting some trees for firewood and "girdling" others by cutting a deep circle around the trunk near the ground, which stops the flow of nutrients between the roots and the crown. These dead trees are left standing to provide food and habitat for wildlife.

"At every stage, as a tree rots, different worms and different birds eat them," Grimes says.

For his part, Kaiser goes through the woods once a year, cutting down all but a few of the small saplings, which will become the next generation of forest as the older trees die: "in-case" trees, he calls them. He also removes the lower limbs from most of the larger trees, which provides more light for the understory and opens up long, inviting vistas through the woods even after the deciduous trees leaf out.

Most of the trees were later cleared from two other parts of the property, each a flood plain area of about three acres. These became Grimes's dry meadow and Kaiser's marshy meadow, which is watered by the outflow of a pond they dug in a low spot by the creek.

Skunk cabbage (*Symplocarpus foetidus*) quickly spread throughout the marshy area, and later muskrats made a home in it, too. Kaiser sometimes drags visitors out into the late winter mud to see the unusual flowers of the *Symplocarpus*, but he could live without muskrats, since they eat the waterlilies he grows in the pond.

Grimes is unsurprised by this sequence of events, and unsympathetic. "Geoff made a perfect habitat for the muskrats, so they moved right in!" he says with a laugh.

"Bruce is much kinder to the wildlife than I am," Kaiser admits.

"We have different management styles here," Grimes adds. "I manage for wildlife and Geoff manages for flowers."

"If the wildlife can come in and be pretty, that's fine," Kaiser says. "I've got pileated woodpecker, and that's fine. If a Bambi could come in and walk around like Jacqueline Kennedy Onassis, that would be fine, but unfortunately . . ."

Planting a paradise of pleasure

Grimes, whom friends consider the



Left: A view of the same glen, pictured on the back cover, during an early spring snowfall several weeks later. **Top right:** Kaiser likes to gather seed from plants on the property and scatter it wherever he thinks it will do well, including on boulder tops. Is Nature or the gardener responsible for this clump of wild columbine (*Aquilegia canadensis*)? **Bottom right:** By dividing a few original clumps of snowdrops (*Galanthus* sp.) over 20 years, Kaiser has made huge drifts around the house and pond. Says Kaiser, "Someone said to me, 'Snowdrops are like money in the bank, it takes a million to make them worth it.'"

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botanist of the pair, has identified and inventoried over 500 species of plants on the property, with help from members of various botanical clubs and plant societies. About three-fourths of the species were on the land when they bought it, and most are trees, shrubs, flowers, ferns and grasses common to the area. A number, however, are unusual, including three native orchids: showy orchid (*Orchis spectabilis*), pink lady's-slipper (*Cypripedium acaule*) and the rarest, two plants of the large twayblade (*Liparis lilifolia*), which they discovered growing on a rock on the hilltop near the house.

Grimes fell in love with the twayblade, so Kaiser, the gardener of the pair, built a footpath to the plant, one of a series of connected paths that meander around the property, probably covering a mile or more in all. Accompanied by their two Labrador retrievers, the two men walk this loop

almost every day they are home, checking on the progress of various plants, sometimes diverting themselves into work along the way.

Kaiser also took on the task of propagating the twayblade, and has managed, by dividing it over a number of years, to increase the original two into 27. He similarly teases pieces off other less common plants, transplanting them into similar conditions elsewhere. Some, including the native columbine (*Aquilegia canadensis*) and pale corydalis (*Corydalis sempervirens*), he propagates by gathering ripe seed and sprinkling it here and there, including into the leaf mould atop some of the boulders.

Besides the beautiful boulder top fern and flower colonies, one finds in the woods a colony of *Silene pennsylvanica* clinging to a boulder side, a clump of partridgeberry (*Mitchella repens*) creeping along a shady moss-covered path, and the rhizomes of *Iris*

cristata traveling fingerlike along the cracks in a flat rock. All these clumps of plants seem right at home and only the gardener knows for sure if those specimens were planted by nature or himself.

Of the 100 or so species Kaiser and Grimes introduced to the property, about 70 are herbaceous, a number of them native plants that were gifts from friends. The remaining 30 represent a variety of native shrubs and trees, including three birches (*Betula* spp.), five magnolias, and about a dozen species of conifers.

The first trees they planted were 800 white pine (*Pinus strobus*) seedlings in 1977. Only 100 have survived, and many have never thrived: the largest, after 20 years, are about 25 feet tall. "It was kind of foolish," Grimes says of this initial enthusiastic, if slightly misguided, planting. "I didn't realize they needed sunshine."

The pines were the property's first "in-

case" trees: in case the old hemlocks (*Tsuga canadensis*) succumbed to blight. But so far the hemlocks are holding on. Only scale, which arrived six years ago, has infested them so far; the property is too remote, as yet, to have suffered more than a token visitation from woolly adelgid aphids that have devastated hemlock groves elsewhere. To control the scale Kaiser has the trees sprayed with dormant oil every two years.

Also planted early on were 35 hybrid rhododendrons, in the glen, to which Kaiser has since added about a dozen native varieties. Large-leaved rhododendrons, with their showy flowers, are among his favorite plants, and besides the hemlocks the only ones on the property he regularly sprays, applying Orthene to their trunks to keep borers at bay.

These plants are also a favorite food of deer — one form of wildlife that both men can agree to hate. But most of the rhododendrons are close to the house, where the deer have not yet dared to come, thanks to a variety of diversionary and scare tactics the two men employ. Occasionally in the winter when the deer are a problem the gardeners bang on tom-toms, howl like wolves, shoot bottle rockets into the woods. Kaiser also diverts deer out of the glen by stringing 40-lb.-test fishing line across their paths and creating new paths to lead them elsewhere. A bow hunter is invited in during deer season; they surround some susceptible plants with chicken wire; they spray the perimeter of the glen once a week in cold weather with a potent home-brewed deer repellent.

But with all this, Kaiser still expects that someday the deer will become so numerous that nothing will work to keep them out anymore, and the "garden" will be lost.

Trouble in paradise

Kaiser and Grimes have made their share of mistakes in the plants they've chosen to introduce or encourage. Recently Kaiser added *Primula japonica*, a plant some people consider invasive, to the wet area near the outlet of the pond. Asked why he chose it, he gives the flower-lover's typical answer: "Because it's pretty." Only time will tell whether this pretty primrose becomes as problematic as another invasive "beauty," lesser celandine (*Ranunculus ficaria*), that he planted in the same area. When that plant began to spread over several acres, Grimes insisted that Kaiser get rid of it, a task he accomplished by hitting each clump with the herbicide Round-Up®.

Grimes knows that he can't keep the woods clean of weeds by himself and has been trying to enlist neighbors in this effort. In an article in a local conservation newsletter titled "Weeding the Woods," he warns that the alternative is to lose the woods to the weeds.

Similarly, early in their gardening years Grimes nurtured the common barberry (*Berberis vulgaris*) he found growing on the property, until one day he realized that it was being seeded far and wide by birds that ate the berries. The plant is now on the property's "hit list" for removal, along with a number of other invasives: multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), wineberry (*Rubus phoenicolasius*), garlic mustard (*Alliaria officinalis*) and stilt grass (*Microstegium vimineum*).

"When we opened up the woods I realized we might exacerbate the weed problem, so I promised myself I'd keep after them, and I have," Grimes says.

If weeds are out of control on a piece of land, Grimes estimates that it can take three or four years of concerted effort to bring them under control. Early on he got rid of most of the Japanese honeysuckle, and he deals with stilt grass, which seems to find a home in any disturbed ground, by cutting it down with a weedwhacker before it goes to seed. Some people find wineberries, a raspberry relative, delicious; Grimes finds the plant pernicious, and pulls it out whenever he sees it.

The troublesome garlic mustard only recently appeared on the property, and Grimes says that just one of the white-flowered plants, left to go to seed, may produce hundreds of babies the following year. In his search-and-destroy mission against the mustard, he not only weeds his own 22 acres, but part of the adjoining land, too, and along the road leading to their house.

To help prevent new weeds from taking hold, he says it is important to maintain good undergrowth, and to let fallen leaves remain as a natural weed-inhibiting mulch. And when planting or weeding, Kaiser and Grimes both try to disturb the soil as little as possible.

Grimes finds that the best time to weed is in fall, or late winter and early spring. "The weeds are easy to spot then," he says, "because they leaf out before the native plants and hold their leaves longer." He cautions novice weeders not to pull out native roses in their zeal to eradicate the

multiflora. One difference is that the natives have straight thorns, while the multiflora has a recurved, hooked thorn that enables it to clamber and climb.

Grimes knows that he can't keep the woods clean of weeds by himself and has been trying to enlist neighbors in this effort. In an article in a local conservation newsletter titled "Weeding the Woods," he warns that the alternative is to lose the woods to the weeds.

"You will one day find that you no longer own your own property — the multiflora will. You no longer will be able to enjoy your woods, which will look more and more shabby as the multiflora climb up and over everything else. And when you compound it with Japanese honeysuckle vine and wineberries, you get an unattractive, impenetrable mess."

Says Grimes, "A drawback of all this weeding I do is that it makes it difficult to enjoy the woods sometimes. I go out there, and all I see are the problems."

And on the seventh day . . .

Over the past 20 years, Grimes and Kaiser have learned much about plants and animals and how to create a garden that includes both. But sometimes they find that this knowledge can be a mixed blessing.

"If all this greenery was just 'bush' we could live here in blissful ignorance," says Grimes.

He adds: "We've climbed the Tree of Botanical Knowledge and learned to love and learned to hate. So we have to deal with our hatred of multiflora rose. That's why Sabbath is important, to set aside our hatred. I think every gardener needs to have a Sabbath, a break from the garden."

The gardening Sabbath for Kaiser and Grimes runs from sundown Friday to sundown Saturday. In that time, they do no work in the garden, and if they talk about it at all, it is only to remind themselves of what they've accomplished.

"One of the challenges of Sabbath," Kaiser says, "is that Bruce is not to see the weeds."

Sometimes this actually works. But other times, as they walk through the woods on their day of rest, both men are busy making mental lists of things to do during the following days, and weeks, and years.



Adam Levine, a member of Philadelphia Green's advisory board, takes care of the award-winning Spruce Hill Garden in West Philadelphia. He lives in Rose Valley, Pa.



CLOSING OUT THE VEGETABLE GARDEN



by Jane G. Pepper

August is great for harvests around our place, but October is almost as good. We are into the last of the summer vegetables (tomatoes, peppers, and eggplants) and are usually still picking The Gardening Partner's favorite, lima beans. Finally, after years of experimenting with trellis arrangements and spacings, we have learned that the experts really *do* know what they're talking about when they recommend not planting beans too close together.

Before we wised up, we used to plant our beans in rows four feet apart, and by late August we had to scramble through a tunnel formed by vines from one row growing over to twine with those in the next. Harvesting was a nightmare. One fall, huffing and puffing, The Gardening Partner dug up most of the heavy posts and reset them so the rows of beans would be six feet apart. Things have improved greatly.

In addition to lima beans, October gives us string beans, planted in early August, plenty of lettuce, and delicious broccoli, Chinese cabbage, and arugula. Yields from the fall garden somehow seem even more of a bonus than those in midsummer, and we still have the carrots and leeks to look forward to during the winter.

Rhubarb is not a favorite with The Gardening Partner, but I could eat it several times a day, and it is one of the garden's easiest and most reliable plants. If you would like to start some and hear a friend extolling its virtues, ask for a division this fall. Failing that, you'll find plenty of plants in the garden centers next spring.

We let our plants go many years without division, contrary to the advice of some gardeners to divide rhubarb every four or five years. But the plants always produced well, with the addition of a fertilizer in early spring and again in late June, after I harvest for the last time. Space plants at least four feet apart to allow for spreading, and plant enough so you can freeze some for the winter. Once stewed, it freezes well, and it makes a great mid-January breakfast fruit. Don't harvest any stalks the first year after planting. In the second year, harvest modestly, and after that, pick as much as you want from spring through June. When picking, pull the stalks, rather than cutting



them, then remove the leaves, which are poisonous.

For late-summer frosts, have old blankets and other covers handy to throw over the tomatoes, peppers, eggplants, and other tender crops. Often we'll have a glorious late summer, and you'll reap a bountiful late harvest by taking precautions on those few cold nights... Carrots, parsnips, leeks, and beets all seem to taste better after a couple of hard frosts, so leave these plants in the ground as long as possible. If you still

have some left by Thanksgiving, cover the plants (leaves and all) with a six- to eight-inch layer of leaves (shredded if possible), and mark the rows to make sure you can find them after a snowfall. In most winters, you'll find that the soil won't freeze under the mulch and you'll be able to harvest fresh vegetables throughout the winter.

Leave winter squash on the vine until the skin is hard and resists pressure from your thumbnail.

After turning the garden over, sow a couple of small rows of spinach. To speed germination, soak the seed for 24 hours in water. The tops will die during the winter, but the same plants will produce a spring harvest much earlier than anything you can plant in early March.

As long as the weather is not too cold, pumpkins will keep well if left on the vine in the garden. When harvesting pumpkins, cut stems, carefully with pruning shears. If the stem tears from the fruit, it may rot.

If the forecasters predict heavy frosts, pick as much of the crop as possible. Peppers and eggplants can be stored in the refrigerator. We lay our surplus tomatoes in a cool room, out of the sun and on a tray covered with newspapers. If you're overwhelmed with green tomatoes, make some green tomato chutney.

I'm reminded of something else for late in the vegetable season. One spring, we covered our first sowings of lettuce, mustard greens, spinach, and Chinese cabbage with low plastic tunnels. The effect on all crops was dramatic, and we were able to harvest those vegetables reared under plastic a full two weeks ahead of the row we had not covered. So I've adapted the same approach to October, using the same plastic over late lettuce and Chinese cabbage. Leave the plants uncovered as long as possible, because if the weather turns unexpectedly warm you may need to remove the plastic to prevent foliage burn. Remember, too, that you'll have to water the plants beneath the plastic. If you have a soaker or drip hose, run it along the row before you put the tunnel in place.

*Excerpted from *Jane Pepper's Garden: Getting the Most Pleasure and Growing Results from Your Garden Every Month of the Year*, available in Philadelphia-area bookstores.

To order your copy of *Jane Pepper's Garden* by mail, please send payment (\$14.95 plus \$1.05 sales tax and \$3.00 shipping) to Camino Books, P.O. Box 59026, Philadelphia, PA 19102, ATT: Edward Jutkowitz. To order by credit card, call (215) 732-2491 or 800-488-8040.

Jane Pepper is the president of the Pennsylvania Horticultural Society.

Making the Garden Accessible

Gardeners know how to cope with mother nature's imperfections: not enough rain, too much shade, poor soil nutrients, the list is endless. The gardeners in this story overcome their individual limitations with determination and the patient encouragement of others.



by Ann McDevitt

photo by Yvonne McClatchy



Tim's garden is wherever his wheelchair will take him. Sometimes it's at home on the deck where he watches his tomato plants grow in pots along with basil, parsley and marigolds. Sometimes his garden is on the patio where the squirrels eat the food from the bird-feeder. Tim needs his garden to be close at hand.

When Tim was in a car accident in 1988, the November of his high school senior year, he suffered a closed-head injury. Following six weeks in the hospital, he spent nine months at Bryn Mawr Rehab. When he came home about a year after the accident, his mom, Yvonne, had built an addition to the house to accommodate Tim's needs. Tim is quadriplegic with cognitive deficits. Still, his senses are intact, and his appreciation of the works of mother nature grows with the seasons. In winter he watches amaryllis bulbs (*Amaryllis belladonna*) grow on the windowsill.

In summer, his brothers and sisters take

him for walks to public parks and the Philadelphia Zoological Gardens. Longwood Gardens and Ridley Creek State Park are favorite spots because they are so accessible. According to his mother, Ridley Creek has a wonderful macadam path that makes pushing the wheelchair easy. And there is a deck out over the creek for fishing.

Bringing the world up close to the chair is important for Tim. His vision is limited to arm's length. Brushing leaves to get their scent, breaking twigs to release an odor is all part of the journey. Years ago, Yvonne went with a guide to the Jenkins Arboretum in Devon, Pa. She said, "I thought it looked like a wild garden before that tour." The guide pointed out many things she'd never noticed before. Now she models her walks with Tim on the Jenkins Arboretum guide's: for example, they look at all the different kinds of fern. "When you walk with a wheelchair you naturally go slower, so you have time to see much more."

Tim can see and smell the flowers and vegetables when the containers are placed at wheelchair height, about 29 inches off the surface of the deck. These containers are set on the deck's bench to raise them. When the squirrels eat the bird food, the seeds sometimes fall into the pots and surprises like sunflowers come up.

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Making the Garden Accessible



Natalie in her gardening attire, hat and gloves, digs in the dirt from the grass side of the garden. The width of the garden is four feet and it can be accessed from both sides. For a border garden, accessible from only one side, the recommended width is two feet.



Jennie stretches out in one of the scooters, designed to support the children in a prone position. It gives them time-out from the wheelchair and encourages movement.

St. Edmond's Home for Children

When you drive up to the entrance to St. Edmond's Home for Children, you are entering a special world. A peaceful sound surrounds it, at least when the children are in school. When they're home from classes most of the children participate in the Garden Club. Jean LeClair, speech therapist at the Home, is the Garden Club

coordinator. Along with the occupational therapist, Jan Rydstrom, and the physical therapist, Marti Padilla, they design activities to promote movement, sensory experiences, hand function, and language communication. There are 40 children at St. Edmond's Home, an Intermediate Care Facility for Mentally Retarded (ICF/MR). Located in Rosemont, Pennsylvania, the

Home has been caring for special children since 1916. All of St. Edmond's children have moderate to profound developmental delays as well as neurological and physical impairments.

Since all the children have little independent motion, it's important to promote movement, and the garden provides an ideal place. The west-facing garden is four feet wide and 50 feet long. It's accessed on one side from a concrete walkway and on the other side from grass. Using tumble-form scooters, the children get closer to the ground and can use child-size tools such as watering cans, rakes and trowels. These scooters come in two forms. Some children can lie on their backs and push their feet for movement, or they can lie on their tummies and push with their arms. From the grass side of the garden, the children can lie on vinyl-covered foam mats made at the Home by Bobbie Petit who customizes most of the equipment used by the children.

To help get them closer to the flowers and vegetables from their wheelchairs, Jean grows different vines over Tee Pee's, five-foot-tall wooden structures made by the maintenance department. Morning glories (*Ipomoea purpurea*), scarlet runner bean (*Phaseolus coccineus*), and cherry tomatoes all grow up the Tee Pee's. She also uses trellises shaped like a cat, the sun and the moon.

Since the Home is located in the Radnor School District, the children attend four different schools in Delaware County. They all belong to 4H clubs and at the end of the school year bring home plants to be transplanted into the garden: carrots, radishes, and lettuce that are later harvested and eaten. Jean calls this the Salad Garden.

Some years the garden has a theme, like the Pizza Garden. For that garden the children grew tomatoes, peppers, basil, onions, oregano along with marigolds (*Tagetes spp.*) and zinnias (*Zinnia elegans*).

Sensory experience is also integral to the garden. Listening to wind chimes, feeling the soil, the texture of plants, their leaves and twigs, looking at different colors of flowers, smelling the various plants, playing in water, all promote age-neutral events.

Ernie who is 19 years old, needs hand-over-hand assistance. That means that Jean or one of the aides will put their hand over his to help him with a task. Linky, 20 years old, only needs partial assistance. And

Natalie, 12 years old, needs verbal prompts. Jean will say, "Pick up the watering can, Natalie." The garden provides some relatively normal life experiences for the children. "Do you want to dig today? Do you want to plant? To water?" "Who is in charge of the bug-catcher?" If Justin is in charge, watch out! He puts them in the jar to show everyone his booty.

Angelo will leave the Home this summer after spending 11 years at St. Edmond's. When he came he was 10 years old, weighed 100 pounds and was 4 feet tall. Now he weighs just under 200 pounds and is 5 feet, 3 inches. At 21 years old he works hard to master exercises that help him control his weight and transfer to his wheelchair with ease. It's never easy to say goodbye to the children, really young adults, when they leave. But now that the Home has a new wing there is room for reunions. And always room outside for more gardens.

Flo Feralio

Flo's my hero — no doubt about it. I want to be just as agile and active at 89 years old as Flo is today. Not only does she manage her greenhouse, as well as her gardens, but she also writes poetry. Her poem "Wildflowers" was one of 307 selected from over 800 entries by the Poetry Book Committee of the National Council of State Garden Clubs, Inc. Published in 1995 and titled *Wildflower Expression*, the book's poets are gardeners from all over the United States.

The day I visited Flo's garden, she was out back pulling weeds. Flo has some essential tools to help her get around in the garden. One is a wagon that a neighbor boy was tired of. She nabbed it from the trash pile and has been pulling her garden equipment around in it ever since. She wears a hat for sun protection, and goggles. The goggles guard against dirt flying into her eyes; years ago one of her eyes was infected from flying dirt while weeding.

At the top of her essential list is the kneeling bench. About three years ago Flo had hip replacement surgery. The arthritis in her hip along with the bone deterioration caused great pain. After the surgery, she went to Bryn Mawr Rehab for therapy. They showed her how to walk up and down steps and to use handrails for support. When she went home, she couldn't get



Flo installed handrails to ease movement to and from the greenhouse.



The waist-high retaining wall around the pool takes the strain off Joan's knee as she pulls weeds in early spring.

down on her hands and knees, so for awhile she weeded from a chair. Now she uses the kneeling bench, which gives her the stability she needs to get up from the ground. Flo belongs to the "nothing fancy school of gardening." She uses a screwdriver for weeding, and whatever's handy to plant.

She is careful about not falling. Just this spring she had a handrail installed on the steps of her greenhouse. If she gets down, she can't get up without assistance. Nothing will stop this indomitable woman from gardening.

Joan Quinn

Maybe indomitable is one of this gardener's virtues. Because that word also describes Joan Quinn's relentless struggle with her knee. From the time she was a young girl, Joan had a "trick knee." It was always there, "Annoying but never painful," she says. Then sometime in her early 40s she began to notice an aching that started in early morning. As the years went on more things became difficult. Trouble going down steps, trouble in the garden, trouble getting up and down, and a lot more pain in the knee. She compensated by kneeling on one knee, using stools and benches. Gardening became a chore. "Time was I would stay out all day and come in just to feed the (seven) children." She had a rose garden in Wynnewood. But taking care of roses can be a full-time job, and as her knee worsened, the swelling could put her in bed for a week.

About seven years ago her doctor said knee replacement surgery was the only way to go. Everything in the joint had deteriorated. But Joan wasn't ready. Her son-in-law gave her a rolling cart, but she didn't have the flexibility to get up from it. And when she grabbed something for more leverage, the cart slipped out from under. But still she held off. Then Tom, her husband, retired and they moved.

New house, new garden. Joan figured out that container gardening was the answer. While they waited a year to see what would emerge in their new surroundings, she stuck to tried and true annuals. They bought from the original owner a property cultivated by a father and his son over a period of 40 years. It is replete with

For More Reading

Accessible Gardening, Tips and Techniques for Seniors and the Disabled by Joann Woy, Stackpole Books, Mechanicsburg, Pa., 1997. \$16.95. 224 pages, 50 line drawings. Softcover.

The Able Gardener, Overcoming Barriers of Age and Physical Limitations by Kathleen Yeoman, R.N., Storey Communications, Inc., Pownal, Vt., 1992.

specimen trees and 11 varieties of pine. Tom is now an avid gardener with his new free time and the garden became a co-operative venture. "He really keeps me going," she said. Finally relenting about the doctor's advice, Joan had the surgery about two years ago. They told her she would never be able to kneel. But she does. "It's a little awkward — a little painful but such a joy to get down on your knees."

Joan still uses lots of pots, growing vegetables like lettuce, and herbs like basil. But the real bonus that came with the house is a stone retaining wall that surrounds the back of the pool. It's waist high. Without stressing her knee she has begun to develop a border garden on top of the wall that carries the seasons. With perennials like wall cress (*Arabis caucasica*) and early summer peonies (*Paeonia* 'Festiva Maxima'), and chrysanthemums cascading over the top for fall color, she fills in her garden's holes with annuals. Her goal is to add more color to the whole garden. The earliest color is the vibrant purple honesty (*Lunaria*). When the silver dollar seed pods of the plant form in autumn she carefully peels the skin, collects the seeds, scatters them over the garden where they wait for next spring.

Bringing the garden up to the gardener can relieve stress on backs as well as knees and hips. For many people, just being outside in the sun is a blessing. The sun has a powerful effect on people's dispositions, its warmth can relax tense muscles, and the

exercise in the garden can help a body stay flexible. Be watchful about the type of paving and footing required to get around. Adaptive tools, raised beds, window boxes, windowsill gardening and some variations on a regular ground-level garden can help a person with physical limitations get around more easily. Keep it simple, keep it safe, stay happy in your garden.

The cycle of the seasons mirrors the evolution of people's lives, ever changing, non-static, growing and resting. Whether change is as sudden and dramatic as Tim's accident, or maturing like Angelo's, or aging like Flo's, or medical like Joan's, we are all different. Learning to respect and compensate for these differences enriches the world around us.

McClatchy Family List of Wheelchair-Friendly Places to Go in Pennsylvania

Beltzville State Park
Lehigh, Pa. (610-377-0045)

Longwood Gardens
Kennett Square, Pa.
(610-388-1000)

Marsh Creek State Park
Eagle, Pa. (no macadam paving)
(610-458-5119)

Philadelphia Zoological Gardens,
West Philadelphia, Pa.
(215-243-1100)

Rails to Trails: Internet address
www.DCNR.STATE.PA.US

Ridley Creek State Park
Media, Pa. (610-892-3900)

Ann McDevitt, founder of the Alliance for Accessible Horticulture, has been a major exhibitor at the Philadelphia Flower Show for three years. She and her group participated in the inaugural Gardener's Studio at the 1997 Philadelphia Flower Show. She currently manages a consulting business, The Accessible Horticulture Group. For more information, call 610-251-9881.



The large *Carlina acanthifolia* at the center of this arrangement never fails to get comments.

Uncommon Dried Flowers

The Three Cs — *Carlina*, *Cardoon*, and *Craspedia*

by Gwynne Ormsby

For bright colors in winter bouquets I rely on easy-to-grow flowers such as strawflowers, statice, and gomphrenas. By experimenting, however, I have found several everlastings to jazz up these arrangements, and to stretch my growing skills. Let me suggest that you try carlinas, cardoon, and craspedia for something different. These plants are not easy to grow but certainly are worth trying because they are magnificent.

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Carlina species

While I have tried many different carlinas and loved the flowers of each, I find *Carlina acanthifolia* produces the most spectacular flower. The solitary blossom with its 4-in. fluffy center surrounded by delicate, opalescent rays, nestles without a stem amidst a small rosette of wide, handsome, prickly blue-green leaves. The 6-in. tall plant measures 1 ft. to 18-in. across, and in flower makes a unique accent in a rock garden.

The flowers of *C. acaulis* are similar to *C. acanthifolia* but smaller, 2-3 in. across. *C. vulgaris* has been the most productive plant for me, producing 20-30 blossoms per plant. These smaller flowers with a 1-in. center have a lovely golden cast. *C. acaulis* and *C. vulgaris* look very much alike in their first season. Each plant is a small

rosette of narrow, green, extremely prickly leaves up to 15 in. across. The flowers usually appear in the second year. One plant of *C. acaulis* produces only a few of the silvery blossoms, each on a short stem. When in bloom *C. vulgaris* makes more of a statement in the garden. The bloom stalks stand about 2 ft. above the leaves at the base and each stalk has many flowers. These carlinas would probably be most appropriately used in a rock garden setting.

I grow carlinas from seed and have had success starting them both in the greenhouse and in the cold frame. I use a well-drained mix of good, gritty soil and protect seedlings from excess water. I plant the few seedlings that I've successfully grown on a slope facing southwest where the plants will receive lots of sun and good drainage. The flowers appear in July or August of

their second year. Sometimes the flowers aren't produced until later years. My plants have all died after flowering.

Harvest is a little tricky. The flowers open in the daytime and close at dark and when it rains. It's best to pick them just before they begin to open. If you pick too early, you'll miss the biggest size. If you pick too late, the fuzzy center will come apart and the rays will turn back on themselves. When you pick them perfectly, you'll be rewarded with a magnificent metallic accent for your arrangements. They air dry easily; just hang the fresh blossoms in a dark, well-ventilated area.

Cardoon

Cardoon, *Cynara cardunculus*, is an artichoke cousin. The plant itself is a wonderful textural accent in the ornamental garden.



The dried cardoon's interesting form as well as beautiful color.

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The huge thistle-like leaves form a silver-gray rosette, 4-ft. tall by 6-ft. across. There is lots of tomentum (white hairs) all over the leaves, especially underneath. A bed of cardoons makes an architectural statement in Longwood Gardens' Texture Display. Notable British gardeners Penelope Hobhouse, William Robinson, and Graham Stuart Thomas extol the virtues of cardoon as a magnificent foliage plant.

But even grander is the floral display. The flower stalks arise in the second year, reaching 5 or 6 ft. in July. The flower bud looks just like a purple artichoke. When the fine, lavender rays begin to emerge, we pick the flower, and hang to air dry. The resulting dried flower is a 3-in. purple "artichoke" topped with lavender fuzz like a thistle flower. As long as we continue to pick the flowers and keep the plants from setting seed, the cardoons keep putting up flower stalks.

Cardoon is a Zone 8 plant so my plants often die during their first winter, thus not flowering. Three or 4 ft. of leaves mounded around the plants in the fall have helped to bring them successfully through some winters. I usually grow them by direct seeding in the garden when the soil is warm. I've also germinated them very easily in the greenhouse and then removed the seedlings

to the cold frame while it is still cold outside. This chilling induces some first-year flowering. I have never let any of my cardoons set seed, as I'm anxious to harvest each spectacular flower it produces. Although the flower is thistle-like, I doubt that unwanted seedlings would pop up all over the landscape as cardoon is tender in our climate. In warmer climates, however, cardoon has become naturalized.

Cardoon is often included as a vegetable garden plant. I learned from Peter Loewer in *Thoreau's Garden** that it is the young stalk and roots that are used. Most cooks blanch the stalks by drawing up the leaves around the center and wrapping with twine. This is done on a dry day in autumn. After about a month the plant is ready for cooking. The tough outer strings are discarded and then the stalks and root are used for soup or for frying. Check with old Italian friends for recipes.

Golden drumstick

Craspedia globosa is a dried flower of much smaller proportion than the other two. We call the flower golden drumstick because that's what it looks like, a yellow 3/4-in. ball atop a sturdy 1 to 1 1/2-ft. stem.

**Thoreau's Garden*, Peter Loewer, Stackpole Books, Mechanicsburg, Pa., 1996.

The plant is a silvery-gray grasslike clump producing lots of the golden drumsticks throughout the summer. It is a handsome plant with the yellow balls floating above the small, silvery clump. *Craspedia* could be used in a rockery, as an edging plant, or in a container. We harvest the flowers when the ball becomes bright yellow, simply hanging them to air dry.

Although it is a perennial, I have not successfully overwintered this Australian plant. I simply grow them each year as annuals in moist, well-drained soil. Although they are silver, hairy plants, it seems the deer find them delicious. Now that we have a deer fence around our garden, I won't have to worry any more about the deer chewing down my planting. The other two plants, cardoon and carlinas, are much too prickly to be of any interest to deer.

I have enjoyed growing cardoon, carlina, and *craspedia*. Because of their exacting cultural requirements I do not succeed with these plants the same way I do with foolproof strawflowers, statice, and gomphrenas. The unique additions these flowers make to our dried flower arrangements, however, makes growing them worth the effort.

Seed Sources

Carlina

Arrowhead Alpines
P.O. Box 857
Fowlerville, MI 48836

Thompson and Morgan, Inc.
P.O. Box 1308
Jackson, NJ 08527-0308

Cardoon

Cook's Garden
P.O. Box 535
Concord, VT 05148

Thompson and Morgan, Inc.
(see above)

Craspedia

Park Seed
Cokesbury Road
Greenwood, SC 29647-0001

Thompson and Morgan, Inc.
(see above)

Gwynne Ormsby grows everlasting flowers with the members of the Country Garden Guild at Melmark, a creative community for adults with mental retardation. She also works as a teaching assistant at Longwood Gardens.

A *Lychnis* of a Different Color

 by Toni Brinton



Lychnis cognata (fulgens).

Several years ago, Polly Hill of Barnard's Inn Farm, Martha's Vineyard, sent me seed of *Lychnis cognata (fulgens)*. Although *Lychnis* had never caught my fancy before, I knew that any gift from Polly, one of America's most honored plantswomen, was certain to be unusual and special. The seeds were sown in late March, germinated easily and three plants were planted out between my 'Miss Lingard' white carolina phlox and the yellow/orange strain of *Crocosmia*.

That first year the plants were leggy and floppy. But they did bloom and the flower color was smashing, a striking peachy orange. Despite the fact that the leaves were riddled with holes, while the neighboring plants were not touched, I did not remove the plants because the blooms were striking.

Then with the wet, relatively cold and dark summer of '96 the *Lychnis* grew vigorously, and produced many gorgeous blossoms, lasting for a three- to four-week period in July and then reblooming in mid-September. *Lychnis* combines fortuitously with the orange *Crocosmia* in a complementary color combination.

Polly has no cultivar name for this plant. The original seeds came to her from the Korean wilds via the seed list sent to her by

Ferris Miller of Chollipo Arboretum in South Korea. She writes that her plants on Martha's Vineyard were, like mine in Pennsylvania, the best they have been in the summer of '96, a season that proved to be good for plants but too cold for most people.

Although I have not yet seen plants for sale, seeds of this *Lychnis* were listed in both the NARGS (North American Rock Garden Society) seed list for 1996, and in the Mid Atlantic Hardy Plant Society seed list received in early 1997. By May 1997 I had three strains of *Lychnis cognata* seedlings planted out in my garden, the ARGs seed came from England, the Hardy Plant Society seed came from Charles Cresson's garden in Swarthmore, Pa., and my own seed. As of early June 1997, without the labels identifying the different strains, you would not as yet be able to distinguish any difference. Additional good news is that both the older plants and the new seedlings have not been attacked as yet by the unknown leaf riddler.

Anyone having experience with this new-to-me plant, please do share your comments and observations. Meanwhile adventuresome gardeners, look for the seed from the sources listed and try it yourself.

Sources

It is necessary to be a member of both the NARGS and the Mid Atlantic Hardy Plant Society to obtain their seed lists. In both instances you stand a better chance at great seed selection if you, yourself, contribute good viable seed.

To become a member, write to the following:

NARGS: Dues \$25 a year; send to
Executive Secretary, NARGS
P.O. Box 67
Millbrook, NY 10546

The Hardy Plant Society
(Mid-Atlantic Group)
Membership Chair, Pat Horwitz
801 Concord Rd.
Glen Mills, PA 19342
Dues: \$15 a year

The author, Toni Brinton, gardens in Chadds Ford, botanizes in New Hampshire and reads seed catalogs all the time.

Letters to the Editor

"The Japanese Beetle are coming and Milky Spore is Back to Challenge Them" *Green Scene*, May/June, 1997

I am writing to you about the *May Green Scene* article "The Japanese Beetle are coming and Milky Spore is Back to Challenge Them." Elise Payne, the author, states "Milky spore does not affect birds, bees, fish, other animals, plants or man. You could have it on your breakfast cereal. . . it's the safest material ever produced for insect control." It sounds too good to be true.

After reading the article I immediately ordered the product from St. Gabriel Laboratories listed as a source. I reviewed the literature supplied with the product, all of which supported most of Ms. Payne's article and statements. The literature supplied did not hint of any "Hazard to Humans" or "Environmental Hazards." The literature in bold print states "Safe for the environment, Milky Spore is a simple natural spore that is harmless to fish, birds, bees, pets, animals, plants or man."

Reassured by the enclosed literature, the Milky Spores were dispersed around my pond and throughout my yard and garden.

To my surprise, the label on the canister paints a very different picture of the product. It states "Precautionary Statements. Hazard to Humans. Caution: avoid inhalation of powder or contact with eyes or open wound. Environmental Hazards. Keep out of lakes, ponds, or streams. Do not contaminate water by cleaning of equipment or disposal of wastes." The front label states "Caution. Do not use on Pasture Land."

I think it is extremely important that your readers be made aware of these potential hazards. I certainly would not put this product on my "breakfast cereal" nor would I knowing what I know now, disperse it on my property. There are other proven organic ways of eliminating the Japanese beetles, such as nematodes, etc.

Thank you for a great publication.

John McClain
Bala Cynwyd, Pa.

The Producer of Milky Spore responds:

St. Gabriel Laboratories produces Milky Spore for sale in interstate commerce. Such sales are governed by federal regulations established by the EPA. The EPA does not have a separate set of laws for biological insect controls but rather groups them

under the regulations established for poisonous chemical pesticides. Consequently, while Milky Spore is not harmful to anything but beetle larvae, the labeling, under existing laws, must contain the EPA requirements for pesticides. The talc carrier we use, for example, is more pure than many baby powders on the market, which use a talc containing asbestos. We use a medical grade that does not contain asbestos. As for the warning about getting the dust in open wounds and eyes, common sense would tell you not to get any dust of any type in such areas. We stick by our statements. Milky Spore is the safest insect control ever developed, and we'd be happy to have breakfast with you at anytime.

Theodore Reuter, Director
St. Gabriel Laboratories
Gainesville, Va.

Questions about Deer Ticks *Green Scene*, May/June 1997

Thank you very much for the articles on skin cancer and Lyme disease. I've saved them to refer to in the future. I do think this is much more valuable than an article about *Daphne*.

Questions: I live in West Philadelphia where deer do not venture. Do I need to be on the lookout for deer ticks here, or only in deer-visited areas like Fairmount Park? We do have an abundance of dog ticks in one of our community gardens. Do they carry any diseases of their own? Also, the article said to pull attached ticks off with tweezers, but I had always been told (with dog ticks) that this would result in the tick's head being left in the skin, perhaps causing infection. I was taught to make them let go first by holding a hot match near them; my husband was told to smother them with butter. On my 2-year-old squirmy daughter, I'd rather use butter, but how long does it take to smother a tick? Would a bath be just as effective?

Nancy Wygant
West Philadelphia, Pa.

Dr. Schumacher, author of the article about Lyme Disease, responds:

I was pleased to get the nice letter about our articles on health in the garden. Nancy Wygant asks some excellent questions. Unfortunately, we do have deer in Fairmount Park, and they do carry the tick that

transmits Lyme disease. My colleagues and I have treated people with Lyme disease who we are quite certain acquired it in Philadelphia. Dog ticks do not carry Lyme disease, but they still should obviously be removed, as there are other less common diseases carried by various ticks.

There have been many methods proposed to remove ticks, including trying to suffocate them with butter. None are any more reliable than removing the tick with a tweezer. One should try to grasp and remove the head by pulling straight back. Removing the body, which harbors the infectious *Borrelia* in the midgut is what is most important. A fragment of the tick head left in the skin may cause some local irritation, but should work its way out and should not transmit Lyme disease. A simple bath will not kill a tick.

H. Ralph Schumacher, Jr., M.D.
Professor of Medicine
University of Pennsylvania
Director, Arthritis-Immunology Ctr.
Philadelphia VAMC

Additional Response to Lyme Disease Questions

Deer ticks should not be a major problem in Philadelphia. However, deer ticks can be present in areas not frequented by deer. Deer ticks are a three-host tick, meaning they require three different hosts to complete their life cycle. They feed on a broad range of hosts during their two-year life cycle. The larvae and nymphs attach themselves to a variety of birds and small mammals, such as mice, voles, and chipmunks. The white-footed mouse is the preferred host of larvae. Larvae feed, drop from the host, molt into the nymphal stage, and attach to small rodents and larger mammals such as the eastern gray squirrel, raccoon, opossum, or striped skunk. Nymphs feed, molt, and then as adults search for a larger host such as dogs, cats, deer or larger mammals.

It is actually the white-footed mice or other rodents that serve as the reservoirs for the Lyme disease spirochete that larval and nymphal ticks acquire when feeding on infected rodents. Then as nymphs and adults, they transmit the spirochetes as they feed on other hosts.

The deer tick is more difficult to remove than the dog tick because of the difference in their mouth parts. The deer tick cannot

"let go," so burning does not induce it to loosen its grip.

There are a few reasons tweezers are recommended to remove deer ticks. First, you want to make sure not to squeeze the stomach contents during removal since this can inject the gut contents into the host, and may actually help in the transmission of the Lyme spirochete. Second, the mouthparts are deeply embedded and difficult to remove, so using tweezers helps get a grip on that tiny area where the mouthparts are embedded. Grasp the tick with the tweezers as close to the skin surface as possible and pull straight back with a slow steady force, avoiding crushing the tick's body.

Home remedies such as Vaseline, matches, alcohol, and fingernail polish usually do not remove the tick. You want to get it off as quickly as possible so it doesn't have a chance to transmit the Lyme-causing spirochete. Baths and butter are not effective.

Nancy Boswold
Penn State Extension Agent
Montgomery County

More on Skin Cancer and Lyme Disease

The May issue of *Green Scene* is my all-time favorite. It speaks so clearly to my concerns, which are not always into landscaping and such. Richard Bitner's skin cancer article and the Lyme disease revisited are the best I've read on these two pertinent, plaguing subjects. Richard's article actually got me to a skin screening for some questionable areas on my face, and I will have one pre-cancerous lesion frozen next week. And I shall forever be more vigilant about hats, sunscreen, etc.

Lyme disease (deer ticks) is the perennial peril in East Hampton so this article will be posted at our vacation house for all to study. (The photos in both articles are certainly graphic.)

I also found out for sure — actually I already knew — that I'm **not** a "for real" gardener [according to Art Wolk].

Natalie Kempner
Woolwich, Maine

Responses to "Are You for Real — What Makes a Real Gardener"

I first want to thank you for your article "What Makes a Real Gardener." It was clever, interesting and would have been funny if it wasn't so true.

I must say however, I took exception to item number 11 [Break the land speed record to get fresh-picked corn into boiling water]. You lose a lot of time driving to the stand and bringing the corn back home. In my family we took the boiling water to the garden so the sugar wouldn't turn to starch before we got the corn in the house.

When we were forced to buy corn at a local stand we took the term "fresh picked" seriously. We had the cutting schedules of the local farmers, and expected to have corn cut only minutes before our arrival. If it was not sweet, the corn was returned with each family member's appraisal of when it was cut. And of course the corn was only bought when the corn from the garden was not available. Store-bought corn was not even an option.

My grandfather, may he rest in peace, had a two-acre garden that supplied four families and a host of neighbors with all sorts of fresh produce. The neighbors had a free lunch for many years, until he found out what he could make on his raspberries, but that is another story.

Brad W. Thompson
Philadelphia, Pa.

Real gardeners can divert passing joggers onto their property to pull weeds.

Paul Urffer
Doylestown, Pa.

Real gardeners resolve each spring to "use protection every time," meaning, yes, **gardening gloves**. But two weeks later their broken nails and calloused, soil-stained hands demonstrate to all the world that they've lost the struggle yet again.

Martha Schardt
Merion Station, Pa.

Taking Herbert Seriously *Green Scene*, May/June 1997

I am 95 years old and live in a retirement home. One of my neighbors, Margaret Wilson, lent me your magazine to read the article by Helen Brunet on "Taking Herbert Seriously" and loved it.

I've had a cereus for quite a few years and have given slips to many who are enjoying it as much as I do and look forward to its blooming. I've read little about it and wondered where it came from.

The flowers are gorgeous and last such a short time.

Please thank Helen Brunet.

Helena H. Leamy
Bloomfield, Ct.

I was very interested in your article because of my own plant. No one has ever really identified it for me.

I started mine from one small piece and, over the years, it has grown so large, we call in the Monster. The difference between "Herbert" and my plant is the color of the blossoms — mine are a deep pink. My sister (in Chicago) has a similar plant and its blossoms are red.

Enclosed are some photos of my plant which is presently in bloom. I have never seen one exactly like mine.

Thank you for your informative and interesting article.

Benita Pols
Jenkintown, Pa.

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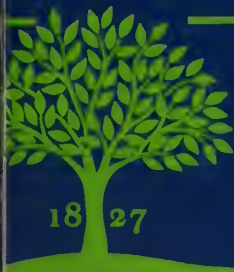
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A vertical photograph of a dense forest. In the lower center, a small wooden structure with a gabled roof is partially visible, nestled among trees and moss-covered rocks. The forest is filled with tall, slender trees and a thick canopy of green leaves. Sunlight filters through the trees, creating dappled light on the forest floor. In the foreground, there are some out-of-focus green plants.

Geoffrey Kaiser and Bruce Grimes removed the dogwoods (*Cornus florida*) growing next to the house, preferring to see them as spots of light in the distance. Viewed from the deck of the house, a dogwood seems to float above the creek. See page 20.
photo by Adam Levine

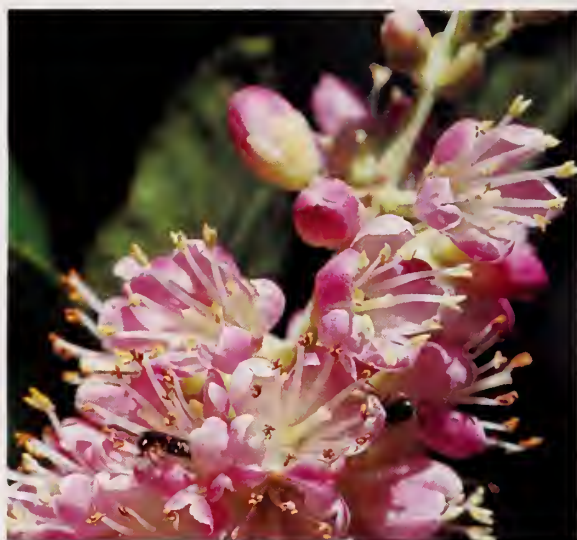


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*1998 PHS Gold Medal
Plant Awards. See page 3.*



3.



18.

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Front cover: A 1998 PHS Gold Medal Plant Award winner *Schizophragma hydrangeoides* 'Moonlight' on the Chimes Tower at Longwood Gardens in Kennett Square, Pa. See page 7. photo by Larry Albee



Grow with us.

in this issue

3. 1998 Pennsylvania Horticultural Society Gold Medal Plant Awards

Richard L. Bitner

10. Constructing a World of Plants

Joseph Kerwin

14. The Hamilton Fernery at the Morris Arboretum — A Victorian Gem

Mary Dolden-Veale

18. Getting to Know Auriculas

Barbara Bruno

22. Wizardry with Mums at Longwood — Try it at home

Art Wolk

27. Tracking the Double Trillium

John & Janet Gyer

31. David Benner's Colorful, Minimal-Maintenance Woodland Garden

Patricia A. Taylor

33. Letters to the Editor

34. Classified Advertisements

CORRECTIONS:

In the **September/October Green Scene**, information about the following high school was omitted from the article "Explore your Options: Pursue an Education in Horticulture" pages 13-17.

Abraham Lincoln High School, Rowland and Ryan Avenues, Philadelphia, PA 19136, Phone (215) 335-5653

Intensive program in ornamental horticulture: Greenhouse production, flower shop management, floriculture, landscape installation, maintenance, basic design, and arboriculture.

Richard Bitner, author of "Weather Report: Sunshine. How to Protect against Skin Cancer," which appeared in the May issue of *Green Scene* advises us that The American Academy of Dermatology address has changed. The correct address is P.O. Box 4014, Schaumburg, IL 60168-4014. The correct phone number is 847-330-0230.

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THE PENNSYLVANIA HORTICULTURAL SOCIETY

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the green scene / november 1997



1998 Pennsylvania Horticultural Society GOLD MEDAL PLANT AWARD WINNERS



by Richard L. Bitner

Aesculus parviflora

The Pennsylvania Horticultural Society Gold Medal Plant awards for 1998 include: two plants native to the United States that flower in summer; two Asian plants, one for bold architectural effect, the other a flowering vine; and a hybrid conifer that will be welcomed by suburban homeowners.

Aesculus parviflora

Zones 4-8

Bottlebrush buckeye is a multistemmed, sometimes widespreading shrubby plant with upright slender branches that can reach 6-10 ft. in height. The growth on old wood is slow but shoots that develop from the base will grow 2-4 ft. in one season. The bold-textured medium green leaves are palmately compound and are little

continued



photo by Larry Albee

The beautiful, fluid form of *Aesculus parviflora* appears to flow across the landscape. Midsummer at Longwood Gardens.

The PHS Gold Medal Plant Award 10 Years and Still Growing

by Kathleen Mills

For a decade The Pennsylvania Horticultural Society's Gold Medal Plant Award program has selected and promoted woody plants that are exceptional garden performers. Nominated plants are evaluated by our distinguished committee, often over a period of several years, and scrutinized for hardiness, disease and pest resistance, and durability in the landscape. Plants that stand up to this scrutiny are winners and can be expected to perform well for the experienced and the novice gardener alike.

In 10 years the program has grown to receive national attention and has become an effective marketing tool for nurseries selling plants as well as a symbol consumers can rely on. Today, wholesale nurseries like The Conard-Pyle Co., West Grove, Pa., and retail centers like Mostardi's Nursery, Newtown Square, Pa.; Triple Oaks Nursery, Franklinville, N.J.; and J. Franklin Styer's, Concordville, Pa., actively promote selected plants as recipients of the

Pennsylvania Horticultural Society's Gold Medal. Many mail-order nurseries like Fairweather Gardens, Greenwich, N.J., identify winning plants in their catalogs, marking them as having superior quality.

Public gardens are ideal spots to see Gold Medal plants used in the landscape. Scott Arboretum of Swarthmore College, Swarthmore, Pa.; Brookside Gardens, Wheaton, Md.; the Morris Arboretum of the University of Pennsylvania, Philadelphia, Pa.; and Longwood Gardens, Kennett Square, Pa., are a few of the places displaying Gold Medal winners.

What's Next

The committee will continue to evaluate woody plants and select the very best for awards. You can help by submitting your stellar performers for consideration. Just call us at 215-988-8800 for an easy-to-fill-out application.

The program plans to create effective point-of-sale marketing tools for retail

outlets so consumers who don't know about the Gold Medal program can learn to shop for the best in plants by looking for our Gold Medal right on the plant. The Conard-Pyle Co. is leading the way, tagging each *Juniperus virginiana* 'Corcorcor' Emerald Sentinel™ that leaves its wholesale yard with the Gold Medal logo.

Finally, this program is about getting good plants into people's gardens. This was the concept with which the late Dr. J. Franklin Styer initiated the program and the ideal that we continue to embrace. Great plants are more than just well-behaved. A superior plant is one that looks good while consuming a minimum of our resources: time, water and money. Plant the right plant in the right spot . . . and make it a Gold Medal plant.



Kathleen Mills is PHS Shows administrative manager and staff manager of the Gold Medal Award Program.



Aesculus parviflora (continued)

troubled by the foliage diseases that afflict other horse chestnuts.

With good growing conditions the plant will have an excellent clear bright yellow fall color. The handsome large flowers are erect white panicles up to 12 in. long and 3 in. wide with pinkish-white stamens that stand out from the petals. They appear in late June and July and are "like sky rockets going off to herald the beginning of summer" according to Phil Normandy, plant collections manager of Brookside Gardens, Wheaton, Maryland. Michael Dirr, a titan in American horticulture says, "There are few summer-flowering plants that can rival this species." Its native range is from South Carolina through Alabama and Florida. He adds that it is "one of the handsomest of all native flowering shrubs."

The 'buckeye' seed will ripen in October in years with long growing seasons. They are relished by small mammals. The bark is smooth and brownish-grey. Some say *Aesculus* is resistant to deer browsing.

Aesculus tolerates shade well but will grow in sunny conditions with adequate moisture. It prefers acid soil, but is adaptable and grows best in moist, well-drained soil rich in organic matter. Pruning is only needed for rejuvenation or to keep the plant within bounds. Other pruning is seldom necessary. It suckers readily but not in an aggressive manner. It is best propagated by root cuttings, removing suckers or fresh seed.

Even if it didn't flower, this would be an excellent plant for massing or as a specimen plant in the shrub border. It's effective under shade trees or for naturalizing. And because the form is fluid and beautiful, a mature specimen appears to flow across the landscape. After leaf drop it will look sparse and open.

This underused plant makes a strikingly clean, bold textured statement that contrasts well with other shrubs in the border.



"They are like sky rockets going off to herald the beginning of summer." Photographed at Longwood Gardens in Kennett Square, Pa.

photo by Larry Albee

Clethra alnifolia 'Ruby Spice'

Clethra alnifolia 'Ruby Spice'

Zones 3-9

This species, native over much of the eastern United States, is on the short list of summer-flowering shrubs that are tolerant of wet sites. Its common name (sweet pepperbush) arises from the shrub's primary seasonal interest — fragrant, small, white flowers borne in large numbers in spikelike clusters up to 6 in. long. They open progressively from bottom to top of the cluster and remain colorful for as long as three weeks in midsummer.

The fragrance is delightful during hot August evenings. Bees will constantly hover about the plant. The spent flowers form dry capsules that look like peppercorns. The foliage is dark green and lustrous and leafs out in late spring. In autumn it turns yellow-orange, more colorful in some years than in others but persists for several weeks. *Clethra* grows wild in both swamps and sandy woods and in cultivation will tolerate both wet and moderately dry soils. It is a poor choice for high limestone soils. It is generally a low-maintenance plant with few insect or disease problems. It grows 3-8 ft. high and 4-6 ft. wide depending on conditions and will stay full and shapely for years with little or no pruning though old plants can become leggy and profit from renewal pruning. An overgrown plant can be cut entirely to the ground in spring. Since the species grows wild close to the seashore it has proved adaptable to shore conditions and tolerates road de-icing salts as well.

Summersweet typically has white flowers, but a "pink" flowering form was discovered about 75 years ago and at least four named pink cultivars of *Clethra alnifolia* are available at nurseries. Although pink in bud, they are all pale pink in flower and fade to white. Gold Medal cultivar 'Ruby Spice' is a breakthrough: it is the first clethra with not only brightly colored buds, but good pink color in the open flower. It is a significantly deeper and richer pink than any other selection to date. It was found in 1992 by Andy Brand of Broken Arrow Nursery, Hamden, Connecticut. Like the native species, the flowers are fragrant and attractive to butterflies and the foliage a nice dark green. It is a vigorous grower and



photo by Larry Albee

Photographed in July at Springwood, Richard and Sally Lighty's garden in Kennett Square, Pa.

expected to reach 6 ft.-8 ft. in 10 years.

Even the native species of this excellent shrub remains unnoticed by all but a small segment of the gardening public. The plant is excellent for its summer flower in the shrub border and is an ideal plant for heavy shade and wet areas. The fragrance is tremendous, the fall color worthwhile, and the winter habit clean.

The humid air (of languid summer evenings) drapes lush fragrances around gardeners who are out and about at the end of the day. Among the most delightful of the many plants that contribute to the sensuality of summer's landscape are the species and cultivars of the genus *Clethra*.

Kim Tripp
The Year in Trees,
Timber Press, Portland, OR, 1995*

Like many other neglected native plants, the beautiful sweet pepperbush improves under cultivation; and when the departed lilacs, snowball, and blooming almond, found with almost monotonous frequency in every American garden, leave a blank in the shrubbery at midsummer, these fleecy white spikes should exhale their spicy breath about our homes. But wild flowers, like a prophet, may remain long without honor in their own country.

Neltje Blanchan
Nature's Garden,
Doubleday, Page & Co., NY, 1900*

*These books are available on loan through PHS's McLean Library to PHS members. Available to non-members for use in the Library.



Mahonia bealei

Mahonia bealei

Zones 6-9

In 1848, during his second trip to China, the plant explorer Robert Fortune found this plant in the Huychow area of Chekiang. It was growing in a neglected garden, and he described it as an upright flowering shrub "surpassing in beauty all the known species of *Mahonia*." Five small plants stored in the Shanghai garden of Thomas Clay Beale, consul from Portugal, were subsequently dispatched to the Standish and Noble Nursery in England, which put the plant into commerce in 1858.

Mahonia bealei is a vigorous, evergreen, multistemmed shrub, striking because of its coarse, compound blue-green foliage. Each leaf may be up to 18 in. in length and composed of as many as 15 holly-shaped leaflets. The flowers appear in late winter and are long chains of bright gold. Multiple upright elongated clusters of hundreds of small, bell-shaped, yellow flowers burst up from the growing points of the shrub and arch over in a shower of gold with a light, sweet scent.

Later they develop into oval berry-like fruit in clusters like bunches of grapes. The fruits are lovely soft blue with a waxy bloom and are relished by the birds. The bark is green when new, and grey-brown when older. The plant has extraordinary winter beauty and will reach 5 ft. at a moderate growth rate.

Mahonia bealei will grow in sun, but it's at its best on the north side of a building or where it has shade or semishade from trees, where the soil is good and there is adequate moisture. It is lime-tolerant and will grow in heavy clay. It blooms in three years from seed, the best means of propagation. Full sun in winter will result in burned foliage, but no pests or diseases are ever found. It requires no maintenance but it can be pruned in June.

Landscape architect William H. Frederick, Jr., says "The extremely large scale of its foliage creates an exotic effect and makes it both a real asset in garden design and a challenging subject to use well." He continues: "As a single specimen in a small garden, it is best to allow it to be the center of attention as it will certainly diminish the importance of any other garden 'features.' In a larger-scale situation a



Top: The summer fruit of *Mahonia bealei*. **Bottom:** Late winter, early spring bell-shaped flowers. These were photographed at Longwood Gardens.

grouping can provide the strength to give structure to the whole picture." He suggests planting it with *Hosta sieboldiana* or the Japanese painted fern or with another coarse-foliaged Gold Medal plant, the oak-leaf hydrangea.

The foliage is useful for bold flower arrangements as cut specimens last a long time.

Mahonia bealei is a distinctive landscape plant with a habit unlike most shrubs. Use it as a background or border plant where

beautifully textured, coarse evergreen foliage is needed. It is a good foil for the softer textures of conifers, grasses and small-leaved deciduous plants. Its form and texture make this striking plant jump into view and attention even when mixed with many other plants. The flowers are like the golden chain tree, they absolutely catch the eye. The bright yellow flowers provide fragrance in late winter and the first place to spot bees. No other plant has a texture like it. A plant with character.

Schizophragma hydrangeoides 'Moonlight'

Schizophragma hydrangeoides 'Moonlight'

Zones 5-7

Many Delaware Valley gardeners grow the climbing hydrangea, *Hydrangea petiolaris*, in a shady spot. It can reach 80 ft. in height and produces flat-topped white flowers with clusters of showy outer flowers and inconspicuous inner flowers.

The Japanese hydrangea vine, *Schizophragma* has a smoother, somewhat denser habit and its white flowers, appearing in June and July, are less showy and held in somewhat droopier clusters. The vine stays flat and does not develop the protruding woody framework of *Hydrangea petiolaris*. It flowers later than the hydrangea and it is more tolerant of hot, wet summers. There is no fruit. One cultivar, relatively new and particularly special, was collected in Japan, where it grows in the woods and forests, by Barry Yinger and has been distributed by Brookside Gardens in Wheaton, Maryland. It was named 'Moonlight' by Phil Normandy because of the foliage pattern of dark veins on a lighter background that sets this cultivar apart. "There is a pewter sheen



The white flat-topped outer flowers cluster around the less conspicuous feathery inner flowers. Photographed in summer at Longwood Gardens.

photo by Larry Albee

that suffuses the green veins and gives it the effect of being illuminated by a full moon." That sheen is a characteristic of juvenile (non-blooming) growth, which doesn't show up on blooming branches.

The plant is a strong-growing wall-climber for light shade or part-day sun. It is self-climbing but is not destructive to mortar. Although it will stick to wood it is better grown on brick or stone. Normandy likes to feature it on silver-trunked trees like tulip poplars. The roots should not be

in hot or dry soil. It is root hardy and adaptable for a container. It is propagated by cuttings. After becoming established for two years it will grow 5 ft. per year and will flower after five years.

It is not invasive like other self-climbing vines like ivy, campsis and parthenocissus. Vines satisfy specific needs in our gardens: softening structural edges, creating dimension around posts and trees and gracing fences (or hiding ugly ones). 'Moonlight' is a superb accent.

Thuja 'Green Giant'

Thuja 'Green Giant'

Zones 5-7

One of the most common questions, particularly of new homeowners, is "What can I plant for a quick screen?" It is a problem: White pine grows fast, but gets too big and loses its lower branches; eastern red cedars are too "common," turn brown in winter and suffer ice damage; and Leyland cypresses fall over and are not reliably hardy.

This fast-growing arborvitae was discussed in earlier publications as *Thuja* x 'Giganteoides' but has now been released by the National Arboretum as 'Green Giant'. It is considered a hybrid of *Thuja plicata* and *Thuja standishii*. It was introduced by noted plant propagator Sheila Gmeiner when she was at Manor View Farm, Inc., of Monkton, Maryland, in 1993. Says Gmeiner: "This vigorous grower has the potential to become the 'Leyland of the North.' Its other attributes are the citrus bubble gum fragrance of the leaves, the fibrous root system, good winter color and no reported deer damage."

Thuja 'Green Giant' is a narrow, pyramidal tree with branches and foliage to the

continued



The leaves have a citrusy bubble gum fragrance. (Summer; photographed at Manor View Farm, Monkton, Maryland.)



***Thuja 'Green Giant'* (continued)**

ground. The foliage is light green in spring and green throughout the rest of the season in relaxed sprays on upright branches. It will grow at least 3-5 ft. a year with a tall leader that will eventually reach 30-50 ft. or more with a relatively narrow spread. The branching is full and dense in the lower three-quarters of the tree and narrows to a long slender leader at its top. Its uniform conical habit needs no shearing or pruning and it holds its own in ice and snow.

Once established it is quite tolerant of extended summer dry periods with no supplemental water. The bark is a furrowed grey and brown to red-brown. 'Green Giant'

prefers sun but will tolerate part shade and shade. It will grow vigorously in dry soil but will tolerate moist conditions and is not fussy about soil pH.

The best means of propagation is by stem cuttings, which root readily most any time of the year under mist. It has a graceful, medium texture and can be used as a specimen or hedge. The grand habit, continual reliability and color in conjunction with virtually no problems with pest and diseases makes this an exciting introduction and a perfect choice for home gardeners and designers of public landscapes as well.



photo by Sheila Gmeiner

'Green Giant', which grows 3-5 ft. a year, has the potential to become the Leyland of the North. Photographed in July at Manor View Farm, Monkton, Maryland.

How to Enter a Woody Plant in the Gold Medal Plant Award Program

It's easy . . . many gardeners have a woody plant that performs well in their gardens. One that looks great, and manages to outwit pests and disease with little care or attention. These are the plants the Gold Medal Plant Award evaluators want to hear about. To enter a plant for consideration please call (215) 988-8800 or fax us at (215) 988-8810 for an application form.

— **Submission deadline is December 1.**

- Three landscape-sized plants must be accessible to the evaluating committee.
- Plants must be hardy from New York City to Washington, D.C.
- A program of propagation must be underway.

Where to Find Gold Medal Plants

You've got to have *Buxus* 'Green Velvet' for your garden, but don't know where to buy it.

Write to PHS for your Gold Medal Plant Award Source List, or pick it up in the PHS Library. Wholesale and retail-mail order sources are listed for 1997 as well as previous winners. Cultural information and descriptions are included. Send a 55-cent SASE to:

Gold Medal Plant Award
The Pennsylvania Horticultural Society
100 N. 20th Street
Philadelphia, PA 19103-1495

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Ex officio

Jane G. Pepper, President,
Pennsylvania Horticultural
Society

Staff Manager

Kathleen A. Mills

Ideal Growing Conditions for Gold Medal Plants

List prepared by Philip Normandy, Plant Collections Manager, Brookside Gardens

Plant	Ideal Water Conditions
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PARTIAL SHADE (tolerates shade)

<i>Mahonia bealei</i>	medium (tolerates dry)
<i>Cephalotaxus harringtonia</i>	
'Prostrata'	medium (tolerates moist)
<i>Hydrangea macrophylla</i>	
'Blue Billow'	medium (tolerates moist)
<i>Schizophragma hydrangeoides</i>	
'Moonlight'	medium (tolerates moist)
<i>Stewartia pseudocamellia</i>	
var. <i>koreana</i>	moist

PARTIAL SHADE (tolerates sun)

<i>Clematis viticella</i>	
'Betty Corning'	medium

SUN

<i>Betula nigra</i> 'Heritage'	any
<i>Hibiscus syriacus</i> 'Diana'	any
<i>Malus</i> 'Donald Wyman'	any
<i>Malus</i> 'Jewelberry'	any
<i>Zelkova serrata</i> 'Green Vase'	any
<i>Juniperus virginiana</i> 'Corcorcor'	dry
<i>Koeleruteria paniculata</i> 'September'	dry
<i>Abies nordmanniana</i>	medium
<i>Cladrastis kentukea</i> (<i>C. lutea</i>)	medium
<i>Cornus kousa</i> × <i>C. florida</i>	
'Rutban' Aurora™	medium
<i>Cornus kousa</i> × <i>C. florida</i>	
'Rutlan' Ruth Ellen™	medium
<i>Crataegus viridis</i> 'Winter King'	medium
<i>Itea virginica</i> Henry's Garnet'	medium
<i>Magnolia</i> 'Elizabeth'	medium
<i>Magnolia</i> 'Galaxy'	medium
<i>Prunus</i> 'Hally Jolivette'	medium
<i>Prunus</i> 'Okame'	medium
<i>Viburnum</i> 'Eskimo'	medium
<i>Syringa reticulata</i> 'Ivory Silk'	medium (tolerates dry)
<i>Thuja</i> 'Green Giant'	medium (tolerates dry)
<i>Acer griseum</i>	medium (tolerates moist)
<i>Acer triflorum</i>	medium (tolerates moist)
<i>Cornus sericea</i> 'Silver and Gold'	medium (tolerates moist)
<i>Sciadopitys verticillata</i>	medium (tolerates moist)

Plant	Ideal Water Conditions
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SUN (continued)

<i>Ilex</i> 'Harvest Red'	moist (tolerates medium)
<i>Ilex</i> 'Sparkleberry'	moist (tolerates medium)
<i>Ilex verticillata</i>	
'Scarlett O'Hara'	moist (tolerates medium)
<i>Ilex verticillata</i> 'Winter Red'	moist (tolerates medium)

SUN (tolerates partial shade)

<i>Deutzia gracilis</i> 'Nikko'	any
<i>Hedera helix</i> 'Buttercup'	any
<i>Magnolia kobus</i> var. <i>stellata</i> 'Centennial'	any

<i>Acer palmatum</i> var. <i>dissectum</i>	
'Tamukeyama'	medium
<i>Aesculus pavia</i>	medium
<i>Cryptomeria japonica</i> 'Yoshino'	medium
<i>Hamamelis mollis</i> 'Pallida'	medium
<i>Hamamelis</i> × <i>intermedia</i> 'Diane'	medium
<i>Hydrangea quercifolia</i> 'Snow Queen'	medium
<i>Ilex</i> × <i>meserveae</i> 'Mesid' Blue Maid™	medium
<i>Magnolia grandiflora</i> 'Edith Bogue'	medium
<i>Viburnum dilatatum</i> 'Erie'	medium
<i>Viburnum</i> × <i>burkwoodii</i> 'Mohawk'	medium

<i>Daphne caucasica</i>	medium (tolerates dry)
<i>Picea orientalis</i>	medium (tolerates dry)

<i>Clethra alnifolia</i> 'Ruby Spice'	medium (tolerates moist)
<i>Fothergilla gardenii</i> 'Blue Mist'	medium (tolerates moist)

<i>Clethra alnifolia</i> 'Hummingbird'	moist
--	-------

SUN (tolerates shade)

<i>Callicarpa dichotoma</i>	any
<i>Heptacodium miconioides</i>	any
<i>Ilex glabra</i> 'Densa'	any
<i>Viburnum nudum</i> 'Winterthur'	any

<i>Buxus</i> 'Green Velvet'	medium
<i>Viburnum</i> × <i>burkwoodii</i> 'Conoy'	medium (tolerates dry)
<i>Aesculus parviflora</i>	medium (tolerates moist)
<i>Viburnum plicatum</i> f. <i>tomentosum</i>	
'Shasta'	medium (tolerates moist)

<i>Halesia diptera</i> var. <i>magniflora</i>	moist
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Richard L. Bitner is a member of the PHS Gold Medal Plant Award Committee. He is a physician, a teaching assistant at Longwood Gardens and an instructor at the School of the Barnes Arboretum.



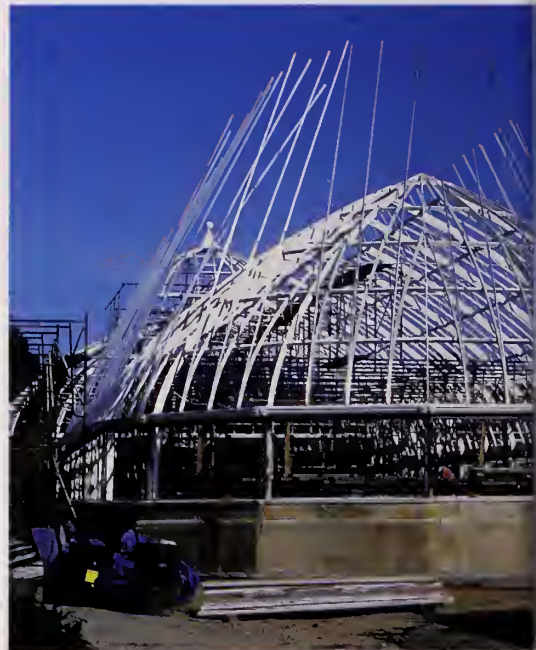
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The New York Botanical Garden's Enid A. Haupt Conservatory — A Crystal Palace in the Bronx. This four-year, \$25 million restoration project featuring a lowland rain forest, is open to the public.

Constructing a World of Plants



by Joseph Kerwin



How do you create a tropical lowland rain forest in New York?

You start with planning, planning, planning, and a glasshouse. It helps to have the expertise of one of the foremost botanical institutions to assist with the challenges of creating a biome, or natural habitat. And, there's the financial assistance of the local governments and the generosity of multi-million-dollar angels for this \$25 million project.

There's also the need to research and locate the thousands of plants necessary to carry the four-year project off, as well as interviewing and hiring an architect, engineers, and contractors to identify the problems, develop design solutions, and start disassembling and reassembling the structure.

The restored Enid A. Haupt Conservatory, originally built at the turn of the century on the rock outcrops of the northwest Bronx, in The New York Botanical Garden is one of the few crystal palaces of its kind remaining in the United States today.

The planning for the conservatory's structural renovation started back in the summer of 1986. First with the staff at the Garden, and then including City of New York personnel, who helped with the initial planning and design and who provided financial support for the construction phase.

The exhibit planning began in the summer of 1992 with meetings between the several departments at the Garden and an outside consultant who interviewed staff and visitors and compiled their feedback into a program document.

The newly renovated conservatory and exhibits opened in early May (1997) to much fanfare for the beauty of the great glasshouse. Its innovative exhibits depict tropical rain forests, a recreation of a natural habitat using the plants found there, as true to nature as we are capable of recreating under glass.

Why a new conservatory?

The building, while stabilized in the mid-1970s, was showing signs of wear caused mainly by the difference in temperatures between the exterior, which can drop as low as 0°F and the interior, which can be set as high as 75°F to provide the plants with the appropriate growing environment. These temperature extremes were separated by a sliver of glass 1/8 of an inch thick attached to a wooden base. The environmental conditions caused condensation, which weakened the glazing system and necessitated the replacement of the wood with aluminum to extend the life of the structure.

The renovation of the structure and the collections began in June of 1993 with the closing of the building and the removal of



Far left: Installing the new aluminum glazing system, which includes more than 17,000 panes of glass.

Left: Unloading large palms from Florida for the conservatory.

Constructing a World of Plants



photo by Tori Butt

Left: Constructing the falling limb in the lowland rain forest from metal, concrete, and a resin with the imprint of the kapok bark, *Ceiba pentandra*.

Below: The complete limb of the great buttress tree planted with epiphytes and blanketed in mist created by the new environmental controls.

photo by Tori Butt



all but a handful of the larger plants, which remained in place during the construction. Medium to small trees and shrubs were shifted around the Conservatory during the construction to keep them out of harm's way. The majority of the plants were held at the NYBG propagation facility in some form or another (mostly cuttings), where they were grown on to specimen size for reintroduction into the new exhibits. We removed approximately 4,000 plants, of which we kept about 3,500. We distributed the remaining plants to horticultural institutions in and around the New York City area. Once the plants were removed, the construction team began dismantling the structure.

They took the building back to its metal skeleton (a combination of cast iron, steel, and aluminum) and limestone foundation. The metal was blasted to remove the paint and rust, and the limestone cleaned. Then began the process of refitting the structure with its new aluminum glazing system and side walls. While the envelope of the building was being worked on, the Garden staff was in the throes of finishing our search for new plants for the exhibits program. The process began by creating a wish list, which was sent to nurserymen in California, Hawaii, and Florida. The staff visited these nurseries to evaluate what was available and to decide what to purchase.

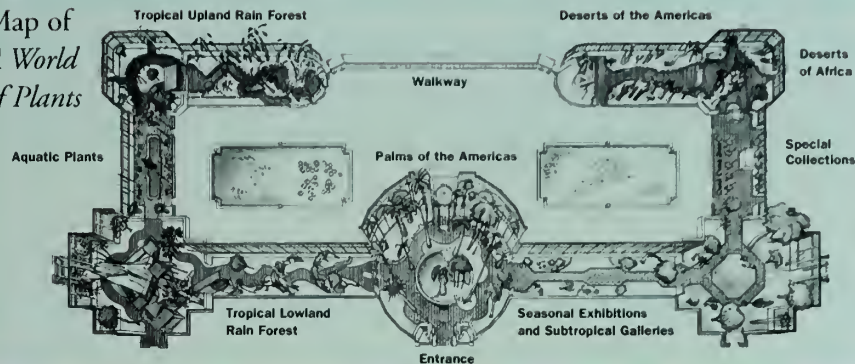
A plant broker who represented us in Florida, searched the lower half of the state by car and talked some local residents into contributing a palm or two for the cause. While we were able to fulfill a good portion of our wish list we knew that the commercial growers could not completely fill the order. So we sent our request to botanical gardens and scientists whose individual collections were germane and would enhance the quality of the exhibits.

Plants for the exhibits

Our next adventure was transporting these treasures to New York. We had to consider the time of year, how long it would take to move them, the temperature inside the truck or barge, how to unload the truck when it arrived. All had to be worked out before anything was shipped.

Plants from Hawaii were shipped by barge across the Pacific; they were unloaded, and reloaded onto a refrigerated truck in California (to regulate the temperature of the plants, which were kept in darkness). Everything was going fine on the eastward trek to New York until the truck broke down in Virginia for a day or two causing some minor stress for the plants. Some seemed to bounce back in several weeks, others were less fortunate.

Map of
*A World
of Plants*



Once the glazing system (the glass covering of the structure) and mechanical systems (environmental systems — misting, heating, venting) were installed, the largest plants were placed to give us the foundation for our new collections and biomes. Experienced local nurserymen planted these larger specimens. Once in place, the installation of the hardscapes began with the walks, pools, structures like the Mayan Healer's House and the Upland Orchid House, the giant buttress tree and its fallen limb; these areas were created to give our exhibits a natural feel, and to suggest a sense of place. The structures will also be used as stations for people who will explain, demonstrate and discuss specific botanical topics i.e. ethnobotany: the relationship between people and plants, and how plants are used for medicine, food, etc.

Once the structures were completed, the staff started planting on and around them. The fallen limb in the lowland rain forest was created from a metal form, coated with concrete, finished with a coat of resin imprinted with the bark of a kapok tree in our collection. Completed, it was planted with bromeliads, orchids, rhipsalis, and aroids. The reason for this limb is two-fold: one, to bring these epiphytes down to the visitor's eye level (normally found high in the canopy layer of the forest) and second, to create a natural gap in which we planted economic plants such as *Theobroma cacao*, chocolate; *Saccharum officinarum*, sugar cane; *Artocarpus altilis*, breadfruit; *Catharanthus roseus*, rosy periwinkle; *Ananas comosus*, pineapple; *Carica papaya*, papaya; etc. In the far corner of this planting, we have set up a Mayan Healer's House. Here we tell visitors about these plants and their economic values and show artifacts associated with a similar dwelling in the tropics. With the finished exhibit structures, the remaining plants were laid out, planted, and allowed to grow to give the exhibit the lush forest appeal we were looking to create. With the assistance of the environmental control system, the mist system spurts out small droplets of water to keep the air moist, which gives the feel and smell of the earthy tropical jungle, in of all places,

da Bronx.

Each of the several thematic exhibits were created in a similar way. The plants came from existing collections or were transported across land and sea; the specific themes were carried out with appropriate structural elements and plants; and the interpretation stresses the differences and similarities of the plant kingdom.


The exhibits themselves, while beautiful and edifying, are just a fraction of the story. They became whole when the interpretation was added. The interpretation stresses four major topics relating to plants today: botany, ecology, ethnobotany, and conservation. Their story lines are brought across to the public in signage, acousti-guides, explainers (guides at stations), children's guides, and handouts. This menu allows the visitor to select the level of knowledge they prefer and also the option to just mosey along and enjoy their journey.

I am often asked what was the most difficult aspect of the project: It wasn't the removal of 4,000 plants or replacing them with 6,000 others, of all shapes and sizes. It wasn't even coordinating the activities of innumerable contractors. Probably the most challenging part was being able to tell all the stories the plants possess.

Take the breadfruit, for example, and its journey across the Atlantic on the *Bounty*, and the uproar it caused when it received water and the men did not. We all know what happened next. How about all the beverages these plants supply like orange, guava and papaya juices, or something stronger like tea, cocoa or coffee, or even stronger yet — like palm wines, rum and tequila. There are also the medicines that are derived from many of these plants to heal diseases and other maladies. Each plant has a story. Picking among them and choosing which story to tell became difficult when there were thousands to select from.

Joseph Kerwin has been Conservatory manager for 12 years. He previously worked at the Pennsylvania Horticultural Society as assistant horticulturist and Flower Show floor manager.

The Hamilton Fernery at the Morris Arboretum *A Victorian Gem*

 by Mary Dolden-Veale

"The cultivation of Ferns is becoming a fashionable pursuit," the world was warned; "almost everyone possessing good taste has made, more or less successfully, an attempt to rear this tribe of plants."

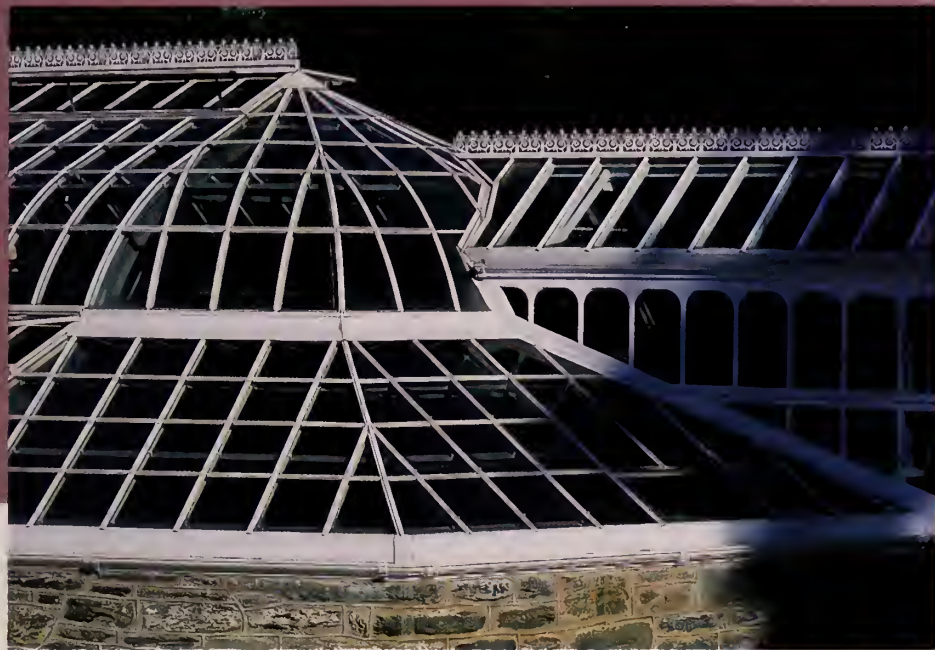
—British historian David Elliston Allen, quoting Edward Newman, from 1840, in Elliston's book, *The Victorian Fern Craze*



photo by Paul W. Meyer

Above. The Hamilton Fernery of Morris Arboretum of the University of Pennsylvania sparkles with stainless steel and 1/8-in.-thick laminated, windshield glass.

the green scene / november 1997



Left Detail of Hamilton Fernery

Below: The verdant cover of a Birkenhead nursery catalog, used by John Morris, reveals a Victorian view of what a fernery should look like. In 1889 Morris ordered more than 1,000 ferns from Birkenhead requesting "as large a variety as possible that would be suitable for such a house but not more than two of one kind."



photo by R. Gutowski

The Hamilton Fernery at the University of Pennsylvania's Morris Arboretum is a gem — architecturally, horticulturally, and historically speaking — it embodies the spirit of the Victorian era. Having undergone a major restoration in 1994, this small but lovely conservatory building, sited prettily within the Arboretum's grounds, is the only significant original building of the former estate of John and Lydia Morris to have survived the economic hardship imposed by two World Wars and the lack of appreciation of Victorian architecture prevalent in this country through the 1960s. It is the only remaining freestanding fernery in the United States.

Originally, the estate had both a large mansion and another conservatory, a Palm House, in addition to the glass house devoted to ferns. Safe and secure now, this remaining structure is surrounded by the arboretum's well-tended 175 acres, the finest example of a Victorian eclectic estate garden in the United States, according to the Arboretum's director, Paul W. Meyer.

The Morris Arboretum itself is often described as one of the Philadelphia area's best-kept secrets, and as you walk through the restored rose gardens and further down a manicured path, the Fernery nestles into a curve of land, its glass roof and ornamented metal structure sparkling in sunlight. The sense of discovery one feels continues as you enter, for inside and underneath the curving conservatory roof stands a tiny Eden: ferns in all their subtle yet sensuous glory, all within a miniature rocky landscape complete with pinnacles, grotto, waterfall and rustic bridge.

A short history of the Fernery

In British horticultural literature of the mid-1800s, ideal ferneries were described in this way: "A scene presents itself which at once in imagination transfers the beholder to a lovely tropical district, such as is sometimes described by travellers who have seen ferns revelling in their native homes." This oh-so-Victorian sense of romance and drama is reflected in John Morris's design of the Fernery and testifies to his studious approach to the project. By the time the Fernery in Chestnut Hill was built in 1899, there existed a wealth of literature and many examples of ferneries in Great Britain, and both John Morris and his sister Lydia, who lived at Compton, as the estate was then known, were known to be dyed-in-the-wool Anglophiles.

Pteridomania, or "fern-mania" had swept Britain in the latter half of the nineteenth century. In a peculiar fervor, typical of the era but nonetheless exceedingly curious to students of that time and culture, many British amateur horticulturists were swept up in the frenzied study, collection and cultivation of ferns. Several associated events contributed to these developments — glass became affordable as a building material; science, technology and ingenuity were used to create everything from Wardian cases (small-scale greenhouse cabinets developed to bring plants by ship from exotic climes; they became the poor man's conservatory) to vast glasshouses such as the Crystal Palace for the permanent display and cultivation of exotic plants. A general belief, promulgated in the literature of the times, that an intense study of nature was somehow both

moral and healthy, fueled the British Victorians' scrutiny of "this noble tribe of plants."

John Morris evidently took to heart the excellent advice from his many British connections. J. Birkenhead, the British builder of conservatories, wrote John Morris in 1892 that an indoor fernery is better where it is possible to go down into the ground: "the effect will be much finer than when the rockwork is all above the ground level. The beauty of the Ferns is seen to best advantage when looked down upon. (This allows tall tree ferns to grow without excessively high-roof construction.) The walks should undulate and wind to and fro; they should be made of stone or concrete with rugged steps here and there, the stone rising on each side, as though the whole were cut out of the solid rock. Bold projections may be arranged at intervals, and so cause an entirely new view [with] each step that is taken. The arrangement of stone should be irregular and free from any appearance of artificiality."

Entering the Fernery through an impressive stone facade, you descend a set of stairs and then descend below ground level,

Right: J. Birkenhead wrote John Morris in 1892 that "The beauty of ferns is seen to best advantage when looked down upon."

through a second set of doors. Once inside, the fact that you are in a building under glass becomes curiously unimportant, and the ferns, growing in and amongst moss-covered rocks in wonderfully evocative formations, transports you from the outside world into a warm and moist "other" world.

The rockwork, which Birkenhead describes as essential, was completed, at least to some extent to John Morris's specifications, by Japanese garden builders Kushibiki and Arai, that Morris had brought to America. They used more than 100 tons of Wissahickon schist within the fernery alone. Scattered throughout other outdoor garden sites within the Arboretum are other examples (several in the process of restoration, a few, in temporary, and yet romantic, decline) of the work of these two gifted Japanese gentlemen. This use of an Asian motif within some of the gardens, and especially within the Fernery, was another particularly Victorian flourish — the opening up of the East to the West symbolized the triumph of world travel and exploration, and westerners were anxious to appear sophisticated in their appreciation of the exotic.

The Fernery today

Having been closed to the public in 1987, when its roof was judged structurally suspect, the Fernery reopened in 1994 after a \$1.2 million renovation. With a new glass and stainless steel roof, the building had been renamed in honor of the major donor to the project, Dorrance H. Hamilton. Not only did Mrs. Hamilton make the important donation to the Arboretum, she acted as "babysitter" to the ferns that had to be removed during the renovation, providing space and care in her own greenhouses until the ferns were ready to be returned to their homes in the outcroppings and rock crevices.

The curving clerestory roof, Morris's



original design over the 53×34-foot clear-span octagon, has been faithfully recreated, in materials that should withstand the corrosive elements inherent to any greenhouse environment. A new hot water heating system was completely rebuilt, still using Morris's original plans for hiding mechanical systems within the stone facade structure at the Fernery's entryway. The rocky miniature landscape was remortared, scrubbed and fitted with new planting medium, and new and old ferns were

replaced, in the span of a single month before the Fernery's reopening to the public. The plumbing, critical to maintaining both humidity and the building's water features — running stream, waterfall and dripping grotto — was completely repaired and updated.

In the three years since the reopening, the ferns have thrived. Shelley Dillard, head propagator at the Morris Arboretum, says that she believes after the first two years, or so, the ferns' root systems are now



Left. *Asplenium antiquum*.

A little "modern" information on ferns

Paul Meyer, the Morris Arboretum's director, notes that John and Lydia Morris were far-sighted. "Their will talks about preserving open space and training stewards of the environment. We want to use the fern collection to tell the story of biodiversity." One of those stories has to do with the unique reproductive process of ferns, a process that was only becoming understood with the intense botanical scrutiny of the mid-1800s. The process is this: Ferns alternate between sexual and asexual generations. The plants you think of as ferns represent only one half of the growth history of a fern. Spores are produced on the backs of some of a fern's fronds, and are eventually released. If a spore then lands in a suitable, moist habitat, it develops into a *prothallium*, a multicelled but tiny structure with both male and female reproductive features. Nature takes its course; male components send out sperm in search of other prothallia — eggs are fertilized, which then grow into the ferns' next asexual and more highly visible generation.

John Morris started the Fernery with about 500 different plants, and in his studiousness, worked hard at keeping them accurately labeled. The new fern collection at the arboretum is as diverse, currently with about 400 different plants, some rare and collected on trips by Arboretum staff members, a few, as yet unidentified. Included are many varieties of tree fern, maidenhair (*Adiantum*), polypody (*Microsorium punctatum*) and felt ferns (*Pyrosia lingua*).

According to Morris Arboretum's head propagator, Shelly Dillard, many of the ferns at the Fernery could make good houseplants, given the right, but she maintains, not-too-exacting growing environment. She points out that they are really quite adaptable, and patient. One favorite of Dillard's is a hare's foot fern (*Davallia* sp.). These fanciful ferns are distinctive in their fuzzy bases, or rhizomes, which form to resemble animals' paws. One specimen, planted three years ago in a newly worked rock crevice, had been a stable grower, but not thriving. Dillard realized one day that the fern was actually moving; its base at the soil line had moved towards its own rock wall, and as she watched it over a period of months it continued to make its way out of the soil and up the wall, clinging as its hairy rhizomes wished, to the rock, rather than soaking in the soil. It is now thriving.

The soil mixture used in the Fernery's rock crevices is one-third soil medium, one-third redwood bark and one-third charcoal.

Dillard also acknowledges that some of these ferns in variety are hard to come by. She shared that they were able to get many of the new ferns through the Varga Nursery owned by Barbara Varga in Warrington, Pa.

The Morris Arboretum is located in the Chestnut Hill section of Philadelphia. The public entrance is at 100 Northwestern Avenue. Telephone (215) 247-5777.

large enough to support the upper growth of the plants, so that while the ferns were healthy, with few exceptions, in the new fernery environment, they are now seeing gains in size. While Dillard says that there was no historical record of Morris's original planting scheme, the fernery's staff was faithful to the original conception of a *temperate* fernery. "This is not a tropical fernery," she explains. "These plants have to withstand 50°F nighttime temperatures. They are plants that would be hardy in a climate like Seattle's."

Robert Gutowski, the Morris Arboretum's director of Public Programs and its unofficial historian says, "The Fernery is the distillation of the Victorian world view: the visual and material wealth of the Far East and other exotic lands, the love of organic form in architecture, the paradox of industrial progress versus reverence for nature, the cultural enrichment of travel, and the moral enlightenment of horticulture in the home." It stands, uniquely in America, as the confluence of a peculiar and rich set of circumstances and characters from both American and British horticultural history. Beyond all this cultural theory, as Shelley Dillard says, entering the Fernery at the Arboretum is like entering your own personal terrarium — a wonderful place to escape the cares of the outside, and very modern, world.

Mary Dolden-Veale is a freelance writer/editor who recently moved to the Philadelphia area. She has written about design and architecture for *The Boston Globe*, *Progressive Architecture* and other publications, and is currently developing experience in writing about garden design and horticultural subjects.

Getting to Know by Barbara Bruno

A U R I C U L A S

A stylish antique returns to center stage

"My first feelings were of disbelief in their reality."

—*Auriculas, Their Care and Cultivation*, by Brenda Hyatt

photos by Barbara Bruno



A "Show" *Auricula* seedling has larger bloom and eye-catching patterning. Show plants should exhibit a well placed ring of stamens, rather than an empty center or "pin" eye. *Auricula* flowers come in all colors except a true blue.

What do you remember of your first Philadelphia Flower Show? A plunge into wall-to-wall, out-of-season floral abundance may seem the gardening equivalent of gone to heaven. And the more lasting thrill may turn out to be a chance encounter with an unfamiliar plant that drew you across the crowded Competitive Classes. Such an encounter can rearrange a plant lover's obsessions. Seeing an auricula primrose for the first time did mine.

Yet, according to my garden visit and flower show observations, not many of us grow auriculas. Too bad. They are interesting and beautiful plants, and although they are reputed to be difficult, they can be grown successfully if their needs are understood. And if you enjoy exhibiting, consider this: If this flower's accumulated awards are any indication, flower show judges also admire the auricula's peculiar perfection.

It's not hard to see why. A well-grown auricula is other worldly. Few flowers possess its presence. The oddly elegant geometry of its flowerheads and waxy leaves command closer inspection. This isn't so surprising, since competition auriculas were literally made for the show bench. In their heyday during the last century, they were bred to turn heads. Growers strove for flowers of a perfectly rounded outline, flowers that would arrange themselves on their waxy stem with the poise of a botanical model. Velvety colors and bold patterning were preferred attributes. The amateur breeders' handiwork took these plants to the edge of reality. They brought to improbable perfection double, striped, and astonishing mealy-edged green and black flowers.

Although hard to come by nowadays, these and beautifully bizarre bicolors or tricolors still gain and hold our attention, and when well grown, they are formidable and spectacular opponents on the competition bench. The hybrids' exhibition classifications of Show, Alpine, and Fancy still largely conform to the specifications set by last century's auricula enthusiasts, thus providing us with a still vibrant taste of



Most of these plants from the greenhouse are moved into the chicken house on cold mid-March nights.

bygone beauty standards.

Aside from their striking appearance, these plants have another more elusive appeal. The sense of mystery about auriculas can draw even nongardeners to the competition railing. We know these plants, even if we don't *know* them. We've seen them somewhere. Perhaps it was on a valentine in a fine-lined portrait lifted from a Victorian book engraving. Or was it among the roses and lilies that unseasonably companion auricula primroses in old Dutch and English flower paintings? These plants are breathing emissaries of the 17th and 18th century floral world.

Alpine auriculas

Not all auriculas you'll see on the show bench are representative of a breeder's caprice. Many growers favor *Primula auricula*, the unembellished, but exceptionally variable, species. This alpine's leaves are often silvered with a protective white powder that coincidentally adds great ornamental value. This coating can appear mealy, textured, or smooth, the smooth form sometimes displays a sharply whiter leaf edge. This coating is as delicate as dust in an airless tomb. An unmarred surface testifies to an exhibitor's almost supernatural vigilance and/or mastery of the wily art of plant show cosmetics. (I wish one of our master growers would come forward with an article on that subject.)

The mountain auricula's flowers are a classic, clear primrose yellow usually with a handsome mealy white eye that it has passed on to its hybrid forms. And it doesn't hurt one bit that these flowers possess a powerfully pleasing, airborne fragrance.

Modern enthusiasts are now busy shaping

these wild flowers to their liking. The miniatures are a charming variation on this wild theme. These are the result of crosses made with other, related small mountain primroses. They are scaled down versions complete with dainty flowers with a wider color range. They share with the species an elegant simplicity that often garners big time ribbons.

Growing Auriculas

Understanding what auricula primroses need to prosper is often trial and error for Mid-Atlantic gardeners. In the beginning, I was unable to keep the few mail order plants I bought each year alive for more than a season or two. Growing auriculas in southern New Jersey demands different tactics from those that work in the cool climates of Britain or the West Coast, where most enthusiasts and authors of auricula books live.

It wasn't until I joined the Doretta Klaber Chapter of the American Primrose Society that things looked up. At my first February seed-sowing meeting, I was impressed with the variety of primula seeds available. That year, I was able to choose five different auricula strains to sow in my member's share of pots. These pots eventually joined others sown with auricula seed that had been ordered from the American Primrose Society and the North American Rock Garden Society seed exchanges.

Aside from wider seed choice, my membership paid off in another way. The various methods of sowing and seed management suggested by the society's experienced growers lead to improved germination. Although all packs didn't germinate, I had

Own an auricula and you'll own the essence of supreme wildness and stylish antiquity, of beauty freely offered, and of the difficult obtained.

seedlings enough to allow me to experiment with cultivation techniques that pointed toward success.

My increasing familiarity with these plants gave significance to articles that had previously seemed unhelpful. One author's offhanded observation now improved my understanding of auricula culture by light years. *Auricula primroses have two dormant periods, summer and winter.* This explained the auriculas' hot weather reluctance to grow! That seeming quirkness and my attempts to overcome it with the usual horticultural encouragement of ample water and fertilizer had led to innumerable plant deaths. I owe my improved cultivation techniques to this insightful revelation.

To understand auriculas' needs it's helpful to picture them growing in their native habitat among limestone boulders above the tree line. Snow keeps the plants relatively dry and insulated from extreme winter temperatures. In summer, the rocky terrain offers some shade and protection, especially for a plant's roots. Despite intense sunshine, temperatures are cool then. Rain can be heavy, but mountainside plants drain and dry quickly. I hoped somehow or other to mimic these conditions in home culture.

Since I first grew all plants in pots, potting soil was an important consideration. The mixture that works best for me is about equal parts potting soil, compost, and Turface, a driveway and golf course surfacing material that I buy at Agway. This product resembles hardened kitty litter and offers the dual virtues of good drainage and superior water holding capacity. I also add a small helping of my sandy soil and a sprinkling of lime.

Keeping summer plants alive

As far as I can tell, the biggest hurdle to plant survival is a hot, muggy summer. I do all I can during hot weather to encourage soil aeration and an airy atmosphere. Plants are set on a raised, slatted table made from cement blocks and a wooden shipping palette, with space between pots. This arrangement encourages the quick evaporation so important in muggy weather. As plants enter summer dormancy, drying leaves collect around their bases or lie threaded through the healthy foliage. These dead leaves can be fatal and should be

removed regularly. They quickly turn mushy and spread rot into a plant's heart during even a short, hot rainy spell. Once infected, a plant is hard to save.

Watering

Daily summer watering is the norm for my potted auricula. Formerly, I used a watering can exclusively to avoid wetting foliage. To speed up the process this season, I experimented with using a hand-held hose shower head once or twice a week on days when moving air would counter the risks associated with wet foliage. Plant loss increased slightly, especially among plants with many small crowded leaves.

Watering at a shaded time is always a good idea. It's essential in hot weather, since moisture trapped in leaf axils precipitates a kind of deadly "athlete's foot" or fungus in full sun, turning the plant's heart seemingly overnight to slime.

Pot Size

As my experience grew, I began to see that restricting pot size helped to maintain summer plant health. My favored plants in their roomier pots were often the first to succumb to wet spells. Plants in small pots survived best. Some three-year-old plants still occupy their 2½-in. beginner's pots. At first underpotting was only a space-saving tactic, since I have overwintered as many as 250 auriculas. Despite this drastic treatment, the plants appear healthy. They grow and bloom well as soon as potted on. I recently read that a British breeder also follows this plan. Perhaps auriculas endure such penury because it mimics their natural habitats, stingy soil pockets among rocks? These confined plants take longer to bloom and then don't bloom prodigiously, but I'm content to see a single bloomstalk to help me decide which plants to discard. Being potbound means roots dry out between watering. I think this helps plants to stay healthy through a muggy coastal summer. Thus, what was necessity is now also a cultural strategy.

Handling summer dormancy

Although I thoroughly wet the soil ball, plants regularly wilt between daily waterings. Their underpotted condition coupled with the fast draining soil mix makes for fast drying. This encourages their natural summer dormancy, making them less subject to hot weather loss. I now seldom lose a plant to summer root rot.

Plants in the Landscape

Auriculas are obviously not destined to

Getting a chosen auricula primrose to bloom to order is a perplexing bit of business. Unlike many other highly cultivated plants, auriculas still possess a wild variability, you might say, willfulness, in their bloom timing. They are also capable of ruinous behavior, such as a shameful refusal to uphold their flowers, if hurried along at more than a seemly pace.



The vigorous "garden red" (right) blooms among seedling auriculas.

be central players in Delaware Valley's spring gardens. Yet, in the right setting they can be useful and impressive minor players, e.g. along flagstone paths in dry partial shade. A cool wall planting seems the perfect place to please them and to show them off closer to eye level — an outstanding garden feature in their season.

Outdoors, auriculas need the same good drainage and protection from midday sun as their potted counterparts. Adequate air circulation is just as important. If these requirements are met, auriculas may settle in. I accommodate them most successfully in a sandy, shady spot where few other plants prosper. They grow moderately, but their bloom is poor. Fine tuning the fertilizer timing and formula may help these plants overcome their poor showing.

Garden auriculas

So far the auriculas I've risked outside have been excess large-flowered hybrids, whose flowers might not be weather resistant. There is, however, a class of plants called "garden auricula" that have been selected for their garden worthiness. This

class includes both antique and modern cultivars as well as seed strains. Some of the older kinds have historical significance and have been passed down through decades. These plants' individual flowers are generally not as exquisitely shaped or strikingly colored as exhibition types, but they boast strong constitutions along with a willingness to thrive and bloom freely in a garden setting. Some are survivors of English and Irish cottage gardens, where a few were dubbed "dusty millers" for their silver mealed foliage, but my first garden auricula was the green-leaved one that I brought home from a rock garden society plant sale, labeled only "garden red." I hadn't tried any garden auriculas before, imagining them inferior versions of show plants, but "garden red" (thank you, dear unnamed donor) changed my opinion, impressing me with the vigor and the beauty of its showy, rich red blooms of good form. After several seasons in a pot, the plant had grown crowded with lanky rosettes, and it was large enough to be a candidate for a trial attempt at division.

Propagation by division

Division must eventually be attempted with all auriculas, since without it they grow ungainly and languish. It's best undertaken when the plant is breaking dormancy, or at least in time for recovery before stressful weather intervenes. For greenhouse specimens, late winter or early spring is probably the safest and surest time. I attempted my first propagation after the red garden auricula had bloomed. This is still an acceptable time, but in the Delaware Valley you risk plant loss if an early hot spell arrives. As I unpotted the plant and teased apart its fleshy roots, some of its smallest, attenuated stems broke away. I separated others with a razor knife. Rooting hormone could have been applied to unrooted cut surface at this point. Without such help, three already rooted sections and three cuttings survived. These were eventually potted in a lean soil mix. I lost two rooted cuttings at the vulnerable newly potted stage to hot weather. I'll try half of the survivors in the garden next spring.

Pests

In my greenhouse, auricula primroses have few, but persistent, pests. However, what I take to be cottony aphids and the small black speck of an insect that disfigures upper leaf surfaces both disappear when plants are summered outside. One benefit of being loath to use pesticide is that the predators will often do the job before the gardener gets around to it. When plants

are moved to fall quarters, vigilance must be stepped up to fill in for the insect patrol. I use Schultz's Houseplant Spray as needed, which works reasonably well. Although my auriculas seem to steadily discard older leaves and the rate steps up as they approach dormancy, be aware that an unexplained increase of yellowing leaves at any time may indicate cottony aphids. This is especially true in the spring or fall when plants and pests are in active growth.

Managing Winter Dormancy

In the fall, plants remain outside until the approach of a really hard frost, which encourages dormancy. Once moved inside the unheated greenhouse, the plants continue their winter shutdown as temperatures drop. Auriculas are hardy alpine, and a coldframe could serve the same sheltering purpose. Winter care consists of an occasional watering on sunny days and covering the pots on nights likely to bring unusual cold. Light waterings stave off premature growth and the risks associated with vulnerably turbid plant cells. A bit of wilting seems to discourage growth and help maintain winter dormancy. The elevated day temperatures in even a well-ventilated greenhouse make plants more susceptible to tissue damage during nightly lows.

Flower Show forcing

I entered my first Flower Show auricula because the plant just happened to be in invincible form at exactly the right megasecond. It was a piece of cake to win a ribbon — that one time. I've never exactly duplicated such nubile perfection since. Now, with the arrival of the winter solstice it's time again to answer the question of how to produce perfect bloom for that targeted March morning.

Getting a chosen auricula primrose to bloom to order is a perplexing bit of business. Unlike many other highly cultivated plants, auriculas still possess a wild variability, you might say, willfulness, in their bloom timing. They are also capable of ruinous behavior, such as a shameful refusal to uphold their flowers, if hurried along at more than a seemly pace. As soon as the weather cools toward a norm of below freezing nights, I begin moving chosen plants inside the insulated old farm building to which the greenhouse is attached. At night and on sunless, frigid days they stay inside near a window where the temperature approaches but never sinks below 32°F. I cram as many potted primroses of all types as I can inside, moving them back into the sunny greenhouse each acceptable

Auricula primroses have two dormant periods, summer and winter. This explained the auriculas' hot weather reluctance to grow!

day. In early January, the two long light units are turned on inside the building, and promising plants arranged beneath them. I say promising, but it's more accurately only a hunch. Some plant left in the cooler window area will hurry into bloom in late December or early January. A few plants placed under the lights wait to flower with the auriculas left to winter in the cold greenhouse.

With so many plants, I can experiment to my heart's content. As the sun strengthens in late January you'll find me moving flats of primroses. I like to see what that solar exposure will accomplish. There's also the question of how much heat and when. Too much seems to encourage weak flower stems, an ever-present mishap when forcing auricula. I'm always sure there's a better way than last year's, and I mean to find it. Sun, then lights? Or vice versa? For beginner or expert, Flower Show forcing is replete with choices. Every step is a multiple choice question. I started the great adventure of Flower Show forcing with only a couple of vague guidelines. Plants seem to need a dormant period. Extra light and warmth encourages bloom. After that the grower's experience or hunches are the guides. A bit of good luck doesn't hurt, either.

It's helpful if the auricula grower likes a mystery, since what was best for last year may not hold for this year's new crop of individualistic plants. And unlike the basement gardener in his weather-impervious environment, winter is a potent force in my plan. The unpredictable cloudy periods and the degree of cold that penetrates my imperfect forcing quarters are the annual wild cards that flummox my timetables and test my talent for invention.

Fertilizing

I have suffered more lost hopes through fertilizing experiments during forcing, than from any other cause. Yet, I still have the feeling that fertilizer timing and formula can elevate the good plant into higher realms, so I'm always trying some new idea and learning with great chagrin what doesn't work. I'm not alone. Auricula books are greatly entertaining for their diverging theories about formulas and timing. When it comes to this subject, there is much dissent even among experts. Some say don't, *do not* feed. I went with this theory at first and just *did not* get results. Others recommend a light application of low

nitrogen fertilizer. One sure thing is that nitrogen in even moderate amounts will bloat leaves and retard bloom past the Flower Show's zero hour. Yet, on the other hand, some swear by it, but of course only at the proper time. I've found that the pot-bound seem more able to handle nitrogen than those darlings I've repotted in advance of the Show. If a richer soil mix is used, it must also be calibrated into the fertilizing equation. Just when a fertilizer is applied can greatly influence results. I'm opting now for a fall application to pump up the plant, then a shot just as buds form to boost size and number. This is risky, since it could encourage weak stems, the nemesis of forcing these plants.

It's late summer as I write this, and I'm getting ready to pot up this year's crop. Their small rosettes still shoulder other similar seedlings in the flat or 2½-in. pots where they germinated. Summer development has been slow, since they were fed sparingly to reduce the crowding that contributes to early losses. Waiting to transplant until the approach of cooler weather seems to multiply successes. And by then, despite restrained top growth, the tiny plants' root systems have increased and strengthened.

Although auriculas can be hurried along, my plants don't usually bloom until they've grown for two seasons. This doesn't bother me, since I take such pleasure in the process. Because of them, gardening has stretched to a year-round enterprise. Each spring brings new plants' first flowerings, and their pre-season bloom is one of the great delights of the gardening year. I anticipate each flower's opening, since variations are infinite. I'm always hoping for a superior Show plant, but the appearance of a color or variety that I haven't yet produced also thrills me. I'm especially taken with the russets, burnt orange, sepia, and burgundy-toned ones. They go well with the greenhouse wallflowers, and, more than the others, they seem the reincarnation of some rough herbal woodcut, flowers of botany's dawning.

Seeing an auricula holds the same excitement for me today as the first one did. Own an auricula and you'll own the essence of supreme wildness and stylish antiquity, of beauty freely offered, and of the difficult obtained. Gone to heaven enough for any gardener, I'd say.

Barbara Bruno gardens year-round on an old South Jersey farm. Her primroses have won her Flower Show ribbons, including the Delaware Valley Chapter of the North American Rock Garden Society's 1996 Best of Day award.

Left: A perfectly symmetrical mum standard at Longwood — the result of nine months of patient care.

Right: Follow the yellow mum road. Horticulture and Hollywood's Wizard of Oz came together flawlessly at Longwood's 1996 Chrysanthemum Festival.

Below: Ready for display at the end of October, this standard was grown in the author's backyard.



Wizardry with Mums a



by Art Wolk

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You're in a stalled line at the local supermarket and your brain is also stuck — in neutral. Suddenly you're awakened by a bright spot in an otherwise dreary setting. Over in the corner are a few pots of yellow cushion mums screaming for attention, and you can't stop yourself from smiling — or from getting out of line to pick up a few pots of these instant mood elevators.

If you're as cheered as virtually every gardener is by these radiant fall flowers, your backyard has probably welcomed hundreds of these simple, but irresistible, low-growing cushion mum plants.

For the *Chrysanthemum* connoisseur, the mum palette expands to include the great variety of blossom shapes and sizes as well as mums grown as trees (standards) or huge billowing waves of daisies that cascade over the sides of large containers.

And then there are the chrysanthemums

at Longwood Gardens where experts not only produce perfect plants, but where horticultural imagination and execution leave the visitor spellbound and awestruck. In the midst of fall's killing frosts, the Longwood conservatories become an extravaganza for the senses.

Over the years Longwood's fanciful mum festivals have featured a variety of themes: from carousels made of topiary chrysanthemums, to fearsome mum dragons, to 20-ft.-long peacocks with mum "feathers."

For 1996, they staged a festival whose theme was "The Wizard of Oz." The festival featured topiaries trained into the shapes of the story's characters, as well as a "whirling tornado" made from leafless branches that stretched to the ceiling of the Conservatory. In addition, actors dressed as Oz characters roamed, and a full-sized Wizard's hot-air balloon floated above Longwood's main entrance.



Longwood — Try it at home

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Although these magical displays may seem beyond the home gardener, the behind-the-scenes horticultural artisans at Longwood are forthcoming about the techniques they use. And by following their advice, even an average gardener can produce good results.

Below I've outlined some of the procedures Longwood horticulturists shared about how they produced their topiaries for the Chrysanthemum Festival, and ways you can incorporate their techniques to put on your own show.

Standards

Standard "trees" stand about four feet tall and are so studded with blossoms that it's hard to detect the underlying foliage. Their simple, symmetrical shape and eye-catching flower masses make it difficult to do anything but bury your nose in the blooms to take in the bouquet.

the green scene / november 1997

At Longwood, they take cuttings in mid-February to March and root them in a mix of half charcoal and half vermiculite. Mums are such versatile, strong growers that you can obtain 95-100% rooting within three weeks by taking cuttings, dipping them in rooting hormone, and placing them in a small container filled with a porous potting mix like Pro-Mix BX. Cover the cuttings with baggies and maintain humidity by attaching the plastic bags to the pots using a rubber band.

Mums bloom in the fall because they form flower buds when the length of daylight decreases. Since you'll be rooting your mums during the winter, it's important to fool these plants into thinking it's summertime by providing at least 14 hours of light. Ordinary fluorescent lights on a timer work fine for the rooting and early growth period. Position the lights only a few inches above the tops of the cuttings.

After three weeks, you should notice that the newly rooted cuttings are growing. Now you can begin gradually to acclimate your plants to lower humidity by opening the plastic bags a little more each day.

About a month from the day you started your cuttings, the plants will be ready to transplant into 6-in. pots. Longwood uses a light, soil-based potting mix for their mums, which provides the nutrients the plants need during their long period of growth. The potting mix is actually pasteurized in ovens to kill the harmful organisms, but retain those which are beneficial.

My wife Arlene would probably disown me if I started baking soil in our oven, so I use a soilless mix, like Pro-Mix BX, with which you can achieve excellent results. Just be sure to use an additional well-balanced fertilizer. I use a water-soluble fertilizer at 1/4 strength for each watering. I suggest a fertilizer that contains micro-

nutrients as well as the usual macronutrients, e.g. Peter's, Miracle-Gro or Pro-Sol.

Continue providing at least 14 hours of light to prevent flower bud formation. To create a standard, pinch out all the side shoots that develop at this point, but don't remove the leaves attached to the main stem.

Sometimes, even with your best efforts to extend the length of daylight, a flower bud, called a crown bud, will appear at the top of the stem. This, of course, causes an undesirable bend to appear in your developing trunk. To avoid this, the horticulturists at Longwood pinch the small rooted cuttings when they're first transplanted into a larger pot. This prevents mid-stem crown buds.

By May 1st, there's long enough daylight in our area to stop using artificial light. Your plants can be moved outdoors to a sunny area and placed in their final containers, using a 10- to 12-in. pot. Be sure to insert a four-foot stake into the middle of the pot, and secure the main stem to the trunk as it grows upwards.

Continue growing your standard until it's 30-in. tall. Pinch the top and let approximately seven side shoots develop from the main stem.

Your goal is to make a round mass of foliage, with as many growth points as possible. Remember: the more growth points, the more blossoms, the bigger the show! To maximize the growth points, pinch each stem after every two sets of leaves. This will geometrically increase the number of growth points.

Eventually, a small ball about 15-in. across, will develop. At this point the growers at Longwood either lightly cover the ball with chicken wire that's tied to the support stick, or they use a secured support ring under the developing branches to prevent breakage as each branch becomes heavier with foliage.

I've successfully used the chicken wire method. It stabilizes the whole mass, even during a heavy rain. The new shoots grow through the chicken wire and eventually you can't even see it. I call it my "no visible means of support" standard.

At last the day comes when you stop pinching so flower buds can develop. The timing depends on which cultivar you're using and its typical bloom date. Usually, the last pinch should occur two months before the projected bloom date. At Longwood, the last pinch occurs about September 1st. My last pinch typically occurs about August 15th, because the cultivars I use begin blossoming around October 15th.

After the last pinch at Longwood, they

Chrysanthemums for Standards and Topiaries

The most favored Chrysanthemum cultivars at Longwood for cascades are 'Megumi' and 'Yamanoha-No-Kumo'.

The favorite Chrysanthemum cultivars at Longwood for standards are 'Gumdrop' and 'Heyward Horry'.

All of the above are available from Kings Mums (see box "Sources for Wire Topiary, Mums, and Information" for address and phone number).

For stuffed topiary, the favorite ivies at Longwood are the following: *Hedera helix* 'Misty'; *Hedera helix* 'Asterisk'; and *Hedera helix* 'Chicago'.

The first two are good for small and medium-size topiaries, and the last is good for very large topiaries (something on the order of a 20-ft. dinosaur).

They also use the following plants in many of their stuffed topiaries: Button fern (*Pellaea rotundifolia*); Table fern (*Pteris cretica* or *P. ensiformis*); Cryptanthus species; Carex species (for topiary "hair"); Moneywort (*Lysimachia nummularia*); and Echeveria species.

The main sources of ivy at Longwood are: Hedera Etc., P.O. Box 461, Lionville, PA 19353, Phone (610) 970-9175. (Catalog is \$2, which is refundable with the first order.) Stan Cassel Greenhouses, Inc., 707 Upper Stump Rd., Chalfont, PA 18914, Phone (215) 822-9476.

The other plants mentioned for stuffed topiary are common houseplants, which are widely available.

Art Wolk

Cascades

You stand on the ground looking far above, and a six- to seven-foot-wide sphere of color mesmerizes you. These are the Longwood chrysanthemum balls or cascades that highlight every mum festival. You may not have a conservatory to display such horticultural works of art, nor a metal shop to provide you with the framework needed for such a huge enterprise, but anyone can produce a dazzling cascade. All it takes is a mixture of sun, mum, and motivation.

Cascades begin life in exactly the same way as a standard. The earlier you start them, the larger the final display will be. The same mums that produce good standards also work well for cascades. At Longwood they root cuttings in January or even earlier.

Standards and cascades diverge at the pinching stage. Since every lateral shoot is developed in a cascade, they aren't removed as in the early development of a standard. Each shoot, except the main stem, is continuously pinched — exactly like the seven branches retained for standards.

At Longwood, they use 16-in. stainless steel baskets lined with long-fibered sphagnum moss and filled with potting media. Into each basket, nine wires are inserted, and two mums are placed next to each wire. At first, the potting mix is added so that it leaves a hollow space in the middle of the basket. In the summer, additional soil is filled in so that the growing cascades have room to produce additional root mass.

These large pots are started in the greenhouse, and each plant is trained onto stakes slanted towards the outside at a 45° angle. This angle prepares the plant for the severe downward angle into which it will be forced. As with standards, the container is moved outdoors around May 1st. Now the central stem of each plant is secured to one of the nine wire legs that slant toward the ground. At Longwood, they also use chicken wire attached to each leg to secure lateral branches.

The laterals are continuously pinched at every second node until the plants are quite large. At that point, there are so many shoots that shears are used to do the pinching. At Calloway Gardens in Georgia, I've seen the gardeners using electric hedge trimmers to do the pinching.

Despite the massive amount of pinching, the plant's terminal is **not** pinched until it reaches the end of the wire, far below the basket.

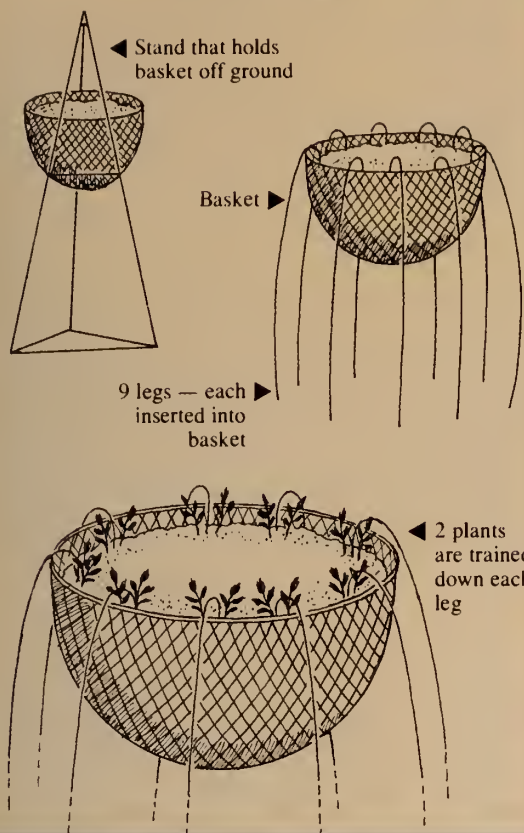
As with standards, pinching is stopped around September 1st so flower buds can

use a stem-shortening chemical spray called B-9 (available from King's Mums) to keep the standard compact when it's forming flower buds. I've achieved good results without it, but my "standards" aren't as high as Longwood's.

Finally, the day comes that makes the months of coddling worthwhile. The multitude of flower buds burst into bloom, and it's not uncommon to have standards with more than 200 blossoms sitting daintily four feet above the pot.

I have two bits of advice at this stage. Firstly, run for the camera so you can remind yourself from time to time of the bit of horticultural history you achieved in your own backyard. Secondly, when the flowers finally begin to fade after several weeks of enjoyment, take a look at the top of the soil. You should see new stolons (shoots) staring you in the face, begging to be rooted, so you can achieve even more wizardry next year.

Training Cascades



photos by Art Wolk



Top right: These cascades at Longwood's outdoor production area are planted in 16-in. baskets. There are nine "legs," with two mums trained downward for each leg. **Bottom left:** After 10 months of growth, the legs of these stunning cascades are tied together, and the ball is raised to the top of Longwood's conservatories. **Bottom right:** The "botanical" Wizard of Oz takes off without the lilyturf Toto, who can only watch from below. The Emerald "Moss" City of Oz is in the background.

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develop. The growth retardant B-9 is sprayed onto the foliage to keep the cascades compact as the flowers begin blooming.

If the weather cooperates, the baskets start blooming just before they're brought into the conservatories for display. But over the years, there have been forecasts of severe frost or even hurricanes, prompting Longwood growers to bring these huge

cascades indoors for the last growth phase.

Finally, in late October the baskets are carefully moved into the conservatories and the nine wire legs are attached together at the bottom. Hoisted high above the conservatory floor, these balls are the highlight of every mum festival.

You may not have the space to display such a huge basket, but there's no reason why you can't produce a scaled-down

version of Longwood's cascades.

I start rooting cuttings in January or February, and move them into five-inch pots within a month. As with standards, I expose them to 14-15 hours of fluorescent light to inhibit flower bud formation. In early May, I move the plants outdoors.

In my backyard, I've had success using three wire legs inserted into a 12-in. plastic pot. I train one plant down each leg, using



If they only had a brain, a heart, the nerve. Perfectly executed topiary Oz characters were the highlight of the festival. Note the mum cape on the Cowardly Lion.

plastic-coated wire twists to attach each plant's terminal to a wire leg. It's best to do wiring in the late afternoon, when the plants are less turgid and there's less chance of breakage. As with standards, my planting media is Pro-Mix BX, and I fertilize lightly at each watering.

I pinch after every two nodes to develop the maximum number of shoots. Again, maximum shoots equal maximum flowers. During the early summer, I attach the ends of my wire legs together, so the three plants can grow into a single mass.

I stop pinching around mid-August to permit flower bud development. Unlike Longwood's growers, I don't use stem-shortening chemicals. I pick a cultivar that begins blooming in mid-October (my favorite being 'Gumdrop'), with peak bloom by Halloween.

Wire-frame topiary

The mums at the 1996 Longwood Chrysanthemum Festival were the backbone of the show, but what really brought it to life were the topiary Wizard of Oz characters. In most cases, there were two topiaries for each character.

Stuffed topiary is planted in June or July, since they only take about half as long to develop as the standards and cascades. The frames are planted from the bottom up, with a 1- to 2-in. layer of pre-moistened, long-fibered sphagnum peat moss used to line the outside and a light potting mix for the inside. Deep within the stuffed topiary, the growers use bags of styrofoam to take up much of the internal space. Longwood has their own planting mix, but if you decide to take on such a project, you can use a professional soilless mix like Pro-Mix BX.

Depending on the plant and its growth habits, anywhere from five to 10 plants are needed per square foot. The plants are added to the topiary by the growers as they

work their way upwards.

Just as the Philadelphia Flower Show artistic niche exhibitors are required to hide the mechanics of their displays, the growers at Longwood use clear Dacron or Rayon fishing line to bind the moss and plant to the frame. The plants grow over the fishing line so it isn't visible in the finished product. They also use fern pins (generally available at florist supply stores) to fasten loose plants against the moss.

Although you may not want to tackle a topiary the size of a Longwood Cowardly Lion, Tin Man, or Scarecrow, you can purchase many table-top topiary wire frames and plant them without straining your wallet or patience. The easiest of all are those topiaries grown from potted plants that have wire frames stuck directly into the top of the growing container. This makes plant maintenance easier than with stuffed topiaries, since it's exactly like growing plants in containers.

The wire frame is stuffed with long-fibered sphagnum peat moss and covered with sheet moss. Either florist's wire or clear fishing line secures the moss to the frame. From this point, the underlying plants are grown onto the moss-covered frame until it is completely covered. As with large topiary, fern pins are used to secure the plants to the underlying structure as they grow upwards along the sides of the frame. Water and fertilize the plant(s) the same as you would when growing them in pots without wire frames.

It's important to use plants that not only branch, but that have flexible, trailing stems; otherwise the topiary's form will not be well defined. Small-leaved ivies are ideal.

With proper care and grooming, you'll soon have your own potted rabbit, bear, swan, or other botanical "animal" to show off at your own topiary festival.

Sources for Wire Topiary, Mums, and Information

One of the best sources for wire frames and plants suitable for table-top topiary frames and plants is Meadowbrook Farm. They also occasionally offer classes in topiary, some sponsored by PHS.

Meadowbrook Farm
1633 Washington Lane
Meadowbrook, PA 19046
Phone (215) 887-5900

The horticulturists at Longwood Gardens suggest the best source for mums to be used for cascades or standards is:

Kings Mums
P.O. Box 368
20303 E. Liberty Road
Clements, CA 95227
Phone (209) 759-3571
Catalog \$2.00

Whether you attempt a standard, cascade, or simply a cushion mum in your garden, there's probably a local Chrysanthemum club in your area with members who would be happy to share their expertise. Contact the National Chrysanthemum Society to find the closest club in your area. Phone (703) 978-7981.

Suggested Reading

The New Topiary: Imaginative Techniques from Longwood Gardens, Patricia Riley Hammer, Garden Art Press Ltd., Northiam, East Sussex, England, 1991. (Available on loan to members through the PHS McLean Library. Non-members may review the book in the Library.)

The 1997 Longwood Chrysanthemum Festival is October 25th through November 23rd, 10am to 5pm. This year's theme is "Fiesta — A Celebration of Latin America." Aside from the eye-popping mums, you can expect to see bands and dancers roving around the conservatories. For information, call (610) 388-1000.

Art Wolk writes and lectures on a variety of garden topics and is president of the Horticultural Society of South Jersey. Like many growers who find bulbs the best way to start the growing season, he thinks mums are the perfect way to end it.



TRACKING THE DOUBLE TRILLIUM



by John & Janet Gyer

Double *Trillium grandiflorum* growing at Robin Hill Arboretum, Lyndonville, N.Y., May 14, 1991. Authors John and Janet Gyer fell in love with this plant when they saw its flower at Robin Hill Arboretum. It began their quest to find a natural population that was producing double flowers.

On a fine spring day in 1864 Emilie Zimmerman walked through her woods to "Pine Hill" near Buffalo, New York, to pick trillium flowers for her home. At that time the large, white-flowered *Trillium grandiflorum* grew abundantly. It still does in some favored places where it forms a nearly complete ground cover in deciduous woodlands. As she walked, a different flower caught her eye. It did not have the usual three petals. It had many petals, so many that it looked like a white carnation. She dug the rhizome and brought it into her garden, the first double-flowered trillium recorded in horticulture.

The discovery of this double trillium is recorded in a letter to the editor of Meehan's Monthly, Volume IV, 1894. The letter was in response to a feature article that mentioned a woman in Escanaba, Michigan, who had recently brought a double-flowered trillium into her garden. Since the late 1800s a number of double forms have been transplanted from the woods into gardens. But only a few clones form the basis for a small (and expensive) commercial supply.

All fully double *Trillium grandiflorum* are sterile. They produce no seed and must be increased by rhizome division, a slow process and one that does not offer the possibility of variation from the original flower form. We reasoned that if a double-flowered plant was found in nature, then some plants near it should carry the genetic trait for doubling. Since single trillium flowers produce seed, the offspring of plants carrying the doubling trait might produce double-flowered forms. This seems to happen in nature. We found a 1944 report of a scattered group of 13 double-flowered trillium plants in a small section

of a much larger population. At least one single-flowered plant with the doubling trait must have produced the seed that grew into the 13 doubles. With that encouragement we set off on an adventure of discovery that is continuing. We have not yet found a natural colony with fully double-flowered plants, but we have observed a lot of the odd trillium habits and met, mostly through their writings and records, the people who began the cultivation of double trilliums.

Henry Francis duPont, however, saw the Gardenside catalog entry and ordered all 10 plants. Fred Abbey returned his check. He felt that such a rare plant should be distributed to as many gardeners as possible and that year allotted Mr. duPont one plant.

The exploring postmaster

Steep hills surround the high valley that cradles Erin, New York. The hills were heavily forested when the 1900s began, and Erin thrived from their lumber. It was a time when many people lived near a forest and wandered through it to study or collect wildflowers. James Smith, Erin's postmaster, loved such outings. Trilliums were his favorites. In May 1924, during a walk with his children, he came upon a plant with fully double flowers. He took it back to his garden where it grew and increased. In addition to his duties as postmaster, James wrote a regular column for the *Elmira Star Gazette*. In 1956 he commemorated his find with a poem published in the *Courier Magazine*.

James propagated his double-flowered trillium by division and recorded his find

both photographically and with a pressed specimen in the Bailey Hortorium at Cornell. The Bailey Hortorium holds a number of other pressed double-flowered trilliums. Of those recorded, only James Smith's is known to have been propagated and distributed to other gardeners.

During the time James Smith and his son Stanley, who later became the curator of Botany for the New York State Museum, were actively studying their local flora, William Smith, his wife Mary, and their children were establishing Robin Hill Arboretum at Lyndonville, west of Rochester, New York. Their successful business, The Lyndonville Canning Company, gave William and his family time to enjoy outings into the local woods. On one outing into Pennsylvania, he found a pink petaled shad bush that still flowers at Robin Hill Arboretum. William gave cuttings to some young nurserymen. The result of their propagation work is now available as the Robin Hill shad bush. But trilliums fascinated William Smith. He assembled a large collection of species and varieties and published on their use as garden plants. Among the trilliums he propagated at Robin Hill was James Smith's double.

William Smith corresponded with numerous gardeners and botanists. One was Henry Teuscher, who served as curator at the Montreal Botanic Garden. William gave Henry a double trillium plant, probably the one from James. (Henry records a slightly different history [*American Horticulturist*, April 1976, 56(2):28-29]. Marion Smith, William's daughter, remembers that during his years of collecting, her father never found a double himself, but his sister did and that too grew at Robin Hill Arboretum. Marion remembers the one from



Partially double *Trillium grandiflorum*. This plant took a step toward a double flower by producing petaloid stamens. The next year it took a step backward and produced single flowers.

her aunt as less full than James Smith's form.) Henry Teuscher successfully propagated his gift and is said to have distributed it to many gardens. William gave double trillium plants to others as well. One went to the late Harold Epstein, president emeritus of the North American Rock Garden Society. Harold propagated his gift and distributed it to other gardens where it has multiplied.

The now widespread presence of this clone in gardens is due to its initial propagation by the observant postmaster of Erin and its distribution by the founder of Robin Hill Arboretum. But even armed with this information, we were no closer to a native colony that spontaneously produced double-flowered forms. We needed more clues to follow.

The gardening doctor

Dr. James Burlingham lived in Syracuse, New York, on a large lot with a steeply sloping back yard in the 1930s. The slope was a gardening challenge that Burlingham willingly accepted and turned into an exquisite rock garden. One of its glorious plants was a double trillium that Burlingham was given by Otis Bigelow, who had found it on his farm north of Syracuse. The plant grew well and was awarded a "Special Prize" at the National Exhibition of the American Rock Garden Society and the Horticultural Society of New York in May 1937.

Burlingham's son Jim, an active member of the Delaware Valley Chapter of the North American Rock Garden Society, told us that his father's garden eventually passed into the custody of the Men's Garden Club of Syracuse. When they could no longer care for the garden, its custody passed to the city of Syracuse. The garden rapidly deteriorated until a few remaining Men's Garden Club members removed some choice plants to save them from oblivion. Frank Griffiths, a club member at that time, moved a double trillium plant to



Double *Trillium erectum* flower. Herbarium specimen at The Academy of Natural Sciences, Philadelphia, Pa. This herbarium specimen of double *Trillium erectum* was collected in 1915. Unfortunately it was not propagated for gardeners to enjoy.

his garden. He and his wife Eleanor carried it with them when they retired to Grafton Pond in New Hampshire, where the plant thrived, protected from pine mice and deer. The trilliums were moved from the heavy clay soil of central New York to a soil composed of leafmold and granitic sand. Ordinarily trilliums do not like sandy soil. Such soils drain too fast and are too warm and dry unless carefully managed. But the trilliums approved of the long, cool, moist springs by Grafton Pond. They multiplied well and provided Frank with the numerous rhizomes he gave to friends and donated to plant auctions of the New England group of the American Rock Garden Society. Shortly before Frank died in 1989 he and Eleanor dug over 50 rhizomes that they sold to White Flower Farm as stock for propagation.

Because they must be vegetatively propagated, double-flowered *Trillium grandiflorum* plants are rarely offered in nurseries. In 1946 Fred Abbey offered 10 double trillium plants in his Gardenside Nursery catalog. His daughter, Betty Royce, remembers the plants as coming from a person in Watertown, New York. Marion Smith remembers that her father tried, unsuccessfully, to purchase from a man in

Watertown, but his name has been lost and his source is untraceable. Henry Francis duPont, however, saw the Gardenside catalog entry and ordered all 10 plants. Fred Abbey returned his check. He felt that such a rare plant should be distributed to as many gardeners as possible and that year allotted Mr. duPont one plant. Over the next several years Mr. duPont purchased several additional rhizomes and planted them at Winterthur. They survived for a time, but being sterile, they could not develop from seed into a massed display like the beautiful sweeps of single-flowered trilliums that now grace the Azalea Woods at Winterthur Museum, Garden & Library in Delaware.

Although the double-flowered *Trillium grandiflorum* clones now in horticulture were discovered before 1950, wild populations still exist that spontaneously produce double forms. Don Jacobs, in his new book *Trilliums in Woodland and Garden, American Treasures*, states that Fred and Roberta Case, authors of the book *Trilliums* recently published by Timber Press, know of a population that contained over 37 separate clones of double trilliums. This population should be a prime site for extensive seed collection to preserve the genetic trait that leads to double flowers. One double selection from that population is being vegetatively propagated at the Mt. Cuba Center for the Study of Piedmont Flora. Fred and Roberta have named it 'Pamela Copeland' in recognition of Mrs. Copeland's long-standing interest in trilliums and her work preserving native plant habitats.

One clone of double trillium traveled through decades of time and twice across the Atlantic before it returned to American gardeners. Allen Bloom has grown a double *Trillium grandiflorum* at Bressingham Gardens, Norfolk, England, for years. He is a skilled propagator and has a sufficient stock population to export a few rhizomes back to a nursery in the United States for sale to gardeners. The North American origin of his clone has not yet been traced.

Tracking the genetic trait that produces the double flower

Double or many-petaled flowers result from mutation in the genetic system that controls the differentiation of sepals, petals, stamens and ovaries from the tip of a growing stem. These mutations are seen most commonly in *Trillium grandiflorum*, but beautiful double forms of other species are known. In 1954 Albert de Mezey of Victoria, B.C., found a colony of *Trillium ovatum* that contained about two dozen double-flowered plants. He later found other scattered colonies with some double

flowers. Seed collected from these colonies should help isolate the genetic trait that leads to double flowers in this species. Unfortunately, as he relates in the April 1972 *Bulletin of the American Rock Garden Society*, collectors removed all the doubles from the first site and urbanization threatens the other habitats.

Edith Dusek notes in the Fall 1988 *Bulletin of the American Rock Garden Society* that one colony with double-flowered plants had already become a parking lot. Some of these doubles are in cultivation. One double form is named 'Edith' for Mrs. Dusek. Don Jacobs describes another lovely double form of *Trillium ovatum* called 'Barbara Walsh' that grows in Oregon gardens and in England as 'Kenmoor'. Propagation of these clones has been slow and very few are available.

Herbaria record a variety of double and fasciculated forms. For example, the herbarium of the Bailey Hortorium at Cornell has one fasciculated specimen of *Trillium grandiflorum* where all parts were multiplied by five. The Academy of Natural Sciences in Philadelphia has a fine specimen of double *T. erectum* collected near Allentown in 1915.

William Smith records that sometime before 1944 Mrs. G. Latta Clement of North Carolina found a fully double *Trillium vaseyi*. This form persisted for a time in a few gardens [April 1956 issue *Bulletin of the American Rock Garden Society*]. Unfortunately, these plants have not been propagated and distributed to gardeners. They are lost to horticulture.

Since double forms of trilliums result from changes in the genetic blueprint for their flower structure, other mutations may cause reversion to the single form. In double *Trillium grandiflorum* this reversion is rare, but in 1996 Leah Burt on the Internet address, ALPINE-L, reported a reversion. When her double trillium was moved it reverted to single flowers for two years and then grew double flowers again. Two years ago we found a partially double form where stamens had become petaloid, but last year it reverted to single flowers. Such revertant plants could be a source of seeds that contain the genetic tendency for double flower formation.

Although understanding of trillium seed germination and growth is increasing (see Case, Jacobs, Gyer), a minimum of four to six years is needed to grow a flowering plant from seed. Because double-flowered trilliums do not have to spend energy on seed production, they tend to form rhizome offsets. Rhizome offsets are best divided in early fall, when the plant is most nearly

dormant. Because offsets grow to flowering size in one to three years, gardeners can increase their planting in a reasonable time. In their books Don Jacobs and Fred and Roberta Case suggest that the number of rhizome offsets can be increased by wounding the rhizome. Mabel Burlingham, Dr. Burlingham's widow, discovered this effect by accident in 1941. A mouse damaged the rhizome of her prized double trillium and increased the number of stems from three to 13 in one season. We are not so fortunate in our garden. When New Jersey mice attack, the plant dies.

In the garden trilliums require summer shade; moist, well-drained cool soil; and freedom from predation by voles, rabbits, squirrels, and deer. The soil that William Smith recommended to Burlingham in 1939 still produces fine growth on most trilliums. William Smith suggested lots of leafmold mixed to a depth of a foot with the soil under a tree or in the shade of the north side of a building in an area that can be kept moist from early spring until the plants go dormant in midsummer. We would only add to this a good quantity of 3/4-in. crushed limestone to reduce the ease with which voles can tunnel to the trillium rhizome. Leafmold is available from a number of municipal leaf-composting operations. Don't use composted sewage sludge or peat moss. An annual layer of chopped leaves will hold moisture in summer and keep down weeds. Weeds can also be controlled with attractive, low groundcovers such as partridge berry, *Mitchella repens*, or sweet woodruff, *Gallium odoratum*. Taller companion plants like solomon's plume, *Smilacina racemosa*, and solomon's seal, *Polygonatum* sp., can help provide the needed summer shade.

The eighth edition of *Gray's Manual of Botany** says that *Trillium grandiflorum* is "Our handsomest, most fickle and sporting species with many scores of aberrant forms." This gives us hope that we may yet find the elusive trillium colony that produces double-flowered plants. Eleanor Griffiths calls our search a quest. Like the quests of old, our search is an adventure that has introduced us to new friends and new plants that populate our garden. At one point we asked rock gardener Mabel Harkness if she knew someone named Smith who grew trilliums. She did, and we were quickly welcomed at Robin Hill Arboretum where we learned about its role in the horticultural origin of double trilliums. We were also welcomed at other gardens, libraries, and herbaria where our searches have given us happy times and days when we tell ourselves that this is what retirement is all about.

To Learn More About Growing Trilliums

Books:

Trilliums, Frederick W. Case, Jr. & Robert B. Case, Timber Press, Portland, OR, 1997

Trilliums in the Woodland and Garden, American Treasures, Don L. Jacobs & Rob L. Jacobs, Eco-Gardens, P.O. Box 1227, Decatur, GA 30031, 1997

Articles:

Trillium Tricks by John Gyer, Spring, 1997, *Rock Garden Quarterly*

Commercial Sources of Double *Trillium Grandiflorum*

Garden in the Woods
180 Hemenway Road
Framingham, MA 01701
(508) 877-7630
(Always limited numbers)

Wayside Gardens
1 Garden Lane
Hodges, SC 29695-0001
1-800-845-1124
(Gardener's Treasury Catalog — limited supply of double trillium)

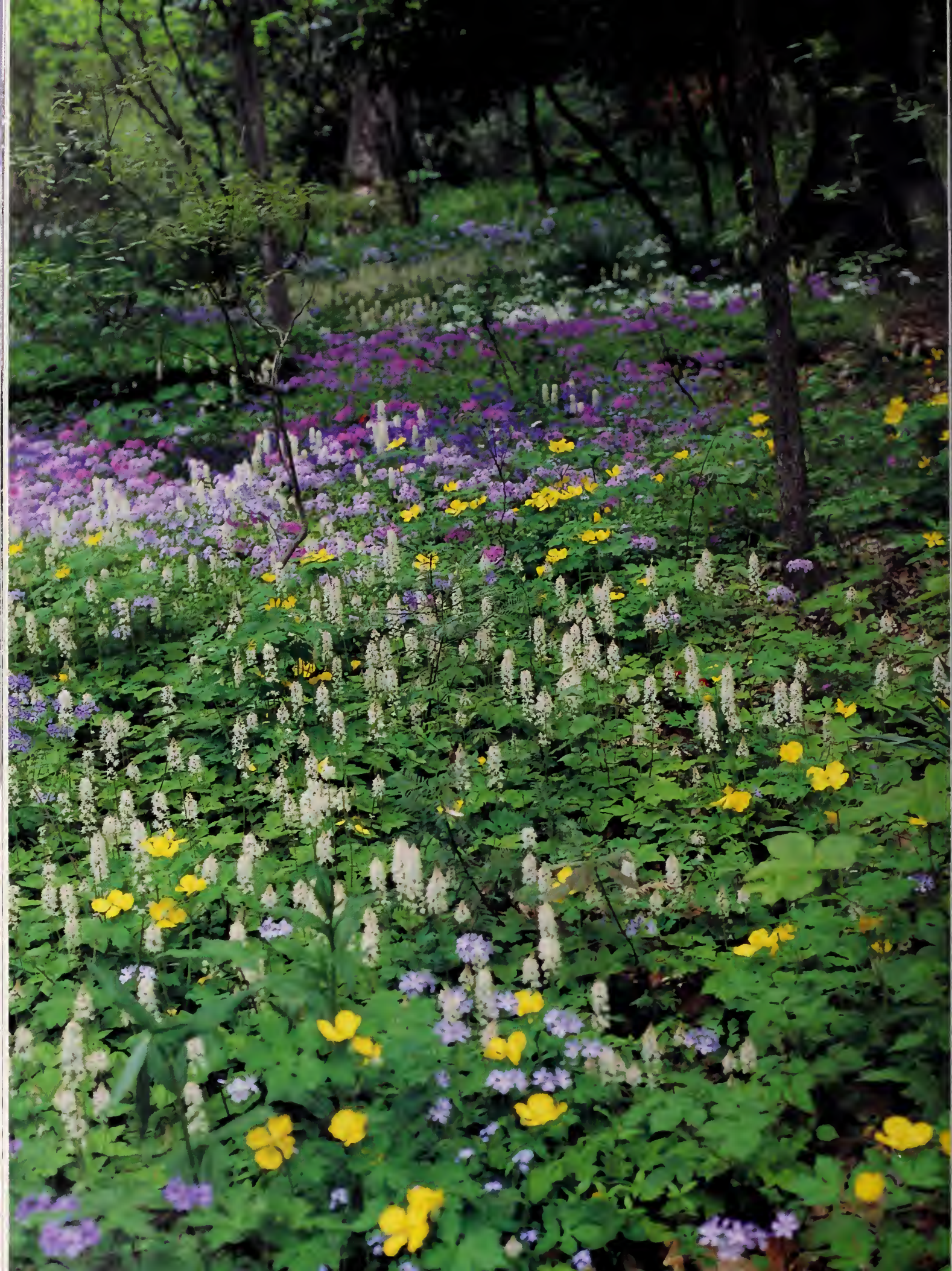
White Flower Farm
Box 50
Litchfield, CT 06759
1-800-503-9624
(Fall catalog limited — double trillium SOLD OUT for 1997)

Acknowledgments

This search for the origins of the double trillium was greatly assisted by people not mentioned in the article. We particularly want to thank Kitty Schanbacher of the Erin Historical Society, Mabel Harkness of the North American Rock Garden Society, Dr. Harrison Flint, and Dr. Richard Lighty.

John and Janet Gyer are among this year's recipients of the PHS Certificate of Merit. They raise Dr. Martin Pole Lima Beans for seed at their home, Fern Hill Farm, Clarksboro, New Jersey. There they grow fruit, vegetables, and an extensive wildflower garden. They share their garden with *Green Scene* readers through their articles.

**Gray's Manual of Botany: A Handbook of the Flowering Plants and Ferns of Central and Northeastern United States and Adjacent Canada*, (8th ed.), largely rewritten and expanded by Merritt Lyndon Fernald, American Book Co., N.Y., 1950



David Benner's Colorful, Minimal-Maintenance Woodland Garden



by Patricia A. Taylor

There's a long-held myth that shade gardens are basically monochromatic green. All that's needed to dispel such a notion is to visit David Benner's woodland landscape in New Hope, Pennsylvania. While you will find color year-round, the most inspiring time to view the garden is during the first three weeks of May, when it is transformed into a fragrant sea of spectacularly colorful groundcovers washing through flowering shrubs and towering trees.

Benner's masterpiece also dispels another myth, the one stating that large gardens require both intensive labor and pesticide use. Benner's truly lovely setting is a pesticide-free, one-person operation that requires minimal maintenance.

Benner has drawn upon many aspects of his life to create his exquisite shade garden, including his training as a botanist and his work as a college professor and an employee of Bowman's Hill Wildflower Preserve, a state park featuring hundreds of native Pennsylvania plants. Most of all, however, he has used his proclaimed love of the leisure life — although as soon as he comes up with a labor-saving idea he quickly uses any new free time to go into another activity.

When he and his wife bought their home in 1962, the color on the two-acre property was a bit sparse. At the time Benner was working at the nearby Bowman's Hill and had a ready source of plants that they propagate for sale as well as field conditions to see what would flourish best.

Of course, some of the plants at Bowman's Hill had settled in at Benner's place also. Clumps of Christmas fern, for example, were scattered about the property. "The best fern there is, no doubt about it,"

he says. "They complement any garden and can be placed anywhere. Their ever-green fronds can even survive in sun and the plant is never invasive."

There were also a limited number of flowering shrubs, including a stand of pinxterbloom (*Rhododendron periclymenoides*), whose rosy pink flowers have continued to burst forth every spring, and a huge summer-blooming rosebay rhododendron (*R. maximum*) "which has probably been growing here for 200 years and is one of the most magnificent that I've ever seen." And there was a lot of overgrown, unwanted brush.

Clearing

As a botanist, he knew this brush would ultimately overwhelm any plantings. So rather than rushing out and installing plants, he spent the first year clearing the overgrowth. Then, as now, he did not use insecticides or herbicides (he is fortunate in not being highly susceptible to poison ivy). His position on this subject is both personal and universal: he didn't want the poisonous runoff entering his well system, and he believes that the environment as a whole could do without such chemicals.

He also took out all maples, a task that eliminated weeding of any self-sown seedlings. The remaining trees were limbed; that is, their lower branches were cut off to create a high canopy that provides bright rather than dense shade.

Planting

With preparation work out of the way, planting began in earnest. Benner decided to concentrate his flower power into a ravishing spring display because he spends much of the summer fishing and hiking in Maine. Because beauty and ease of care were two essential requirements, the majority of plants in his landscape are natives.

Four form the backbone of Benner's May woodland show: goldenstar (*Chrysogonum virginianum*) with bright yellow flowers; blue woodland phlox (*P. divaricata*) with fragrant flowers that range from rich blue to white; creeping phlox (*P. stolonifera*) with predominantly pink flowers but random, self-sown white, lavender, or blue ones as well; and foamflower (*Tiarella cordifolia*) with foamy white to pink spikes. These all were planted in 1963 and have since spread robustly throughout the property.

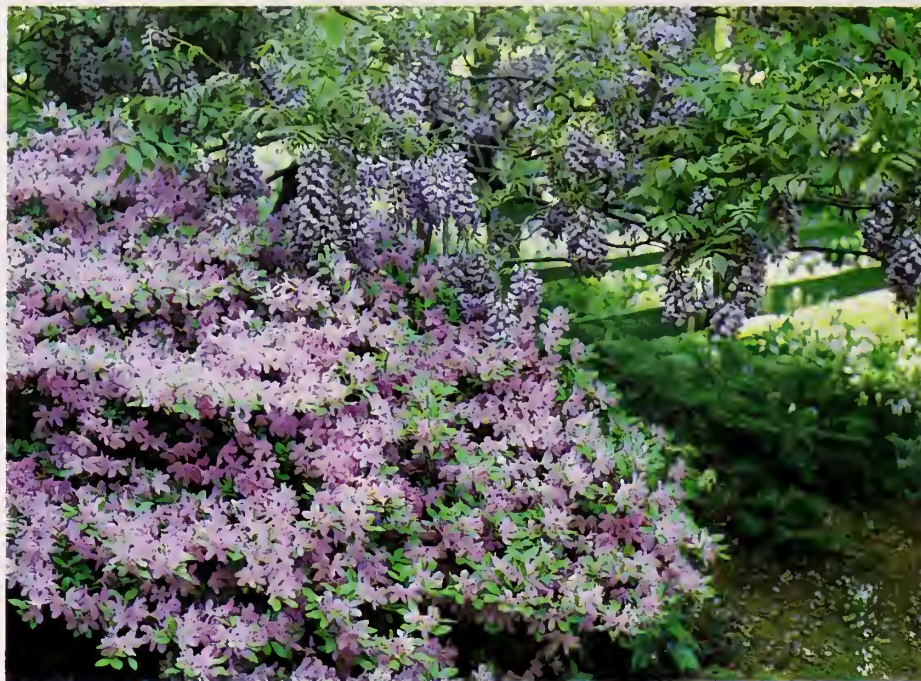
Though Benner added many more May-

Left: Colorful, no-maintenance groundcovers stream through David Benner's May woodland garden in New Hope, Pa. Among those pictured are yellow celandine poppies (*Stylophorum diphyllum*), white foamflowers (*Tiarella cordifolia*), and pink creeping *Phlox stolonifera*.

Right: A blanket of wild lily-of-the-valley (*Maianthemum canadense*) is punctured by white foamflower (*Tiarella cordifolia*); pink creeping phlox (*P. stolonifera*); the tiny red petals of fire pink (*Silene virginica*); and the unfolding fronds of christmas fern (*Polystichum acrostichoides*).



photos by Patricia A. Taylor



"Only God and a bumblebee know the parentage of this azalea," says Benner. It is among the many that have self-sown throughout his property.

blooming plants, he did so without any garden plans. "Plotting on paper is useless," he comments. "You have to know your plants and know the right place to put them so that they will flourish on their own. I would sometimes walk around for days before placing a plant."

He admits, "Of course, I made mistakes. I put in several cute little things that went on to become way too big for their spots.

Benner's truly lovely setting is a pesticide-free, one-person operation that requires minimal maintenance.

Most people do that. I just cut them out or learned to live with them." Even though he sometimes ignores his own advice, he feels it's important to know the mature size of a shrub before planting it. Such knowledge eliminates both mistakes and time spent rectifying them.

Benner's initial thought was to keep the garden to one-half acre. Since he was doing a lot of walking about initially to place many unusual shrubs — a red-flowered Florida anise (*Illicium floridamum*) has flourished on his Zone 6 property for 10 years now — and to transplant many of the self-sown azaleas, it quickly grew to an acre and is now approaching an acre and a half. This expansion could have created problems because Benner had neither the time nor the inclination for the additional upkeep such widespread planting usually entails. Instead, it lead Benner to develop

two labor-saving approaches.

Labor savers

The first eliminated the lawn area and, with its disappearance, the need for any mowing or grass maintenance. In its place, he created moss paths and became one of the country's leading experts on moss gardens.

The second did away with leaf raking. He purchased vinyl netting and loosely placed in on top of all evergreen ground covers. In a yearly ritual that he considers essential, he spreads these about at the beginning of September and rolls them up with their leaf catch at the end of October. The leaves are deposited in a big compost pile and returned to the garden as humus. This is the only fertilizer the entire setting receives.

Because his woodland habitat is so natural, Benner is able to raise and display many uncommon natives. His growing conditions, for example, are responsible for what he calls "the largest partridge berry patch in the United States." This 18x25-ft. area is literally blanketed with the dark green foliage of the diminutive groundcover (*Mitchella repens*). Its red berries sparkle amidst the leaves throughout winter and come June are replaced with tiny but exquisitely fragrant white flowers. "A patch like that is just terrific," Benner observes enthusiastically.

Over time, however, there was one aspect of the garden that was becoming decidedly troublesome: the increasing presence of deer herds. Benner hated the thought of erecting a fence, as he believed it would

take away from the lovely naturalness of his woodland setting.

Instead, he hit upon an ingenious solution, one that has gained him the thanks of gardeners across the country. He turned to nets again, but this time he converted them to fences. Using a dark vinyl import from Italy, he tacked the 7½-ft.-high material to trees around his property. The netting usually cannot be seen and is completely effective in keeping deer out of the garden (see box).

With all deer at bay and with ideal growing conditions, Benner's garden remains a spectacular demonstration of spring flowers. Nature, however, is at work even when Benner is away in Maine. In early July, the rosebay rhododendron opens its blush pink blossoms and the clove-scented fragrance of the white to light pink flowers of swamp azaleas (*Rhododendron viscosum*) wafts through warm summer air. In the background, white spires of black cohosh (*Cimicifuga racemosa*) shoot up.

Throughout the summer, pinkish magenta blossoms of flowering raspberry (*Rubus odoratus*) continue to open while blueberry shrubs (*Vaccinium corymbosum*) add dots of deep blue. Occasionally, there will be a rebloom of the white or pink flowers of fringed bleeding heart (*Dicentra eximia*) and the blush pink flowers of the clumping forms of foamflower (*Tiarella wherryi*).

When fall comes, the blueberry bushes turn scarlet and the leaves on many of the azaleas turns purple, red, or orange. Spicebush (*Lindera benzoin*), according to Benner, is particularly attractive with bright yellow foliage profusely decorated with cheery red berries; "birds love it," he adds.

With Benner's low-maintenance garden and plant suggestions as a guide, don't you think it's time to color up your shade garden?

●

Patricia A. Taylor's colorful shade garden in Princeton, New Jersey, incorporates many of the trees, shrubs, bulbs, and perennials described in her books on *Easy Care Native Plants*, (Henry Holt, N.Y., 1996) and *Easy Care Shade Flowers* (Simon & Schuster, N.Y., 1993).

For Additional Information

For further information on touring Benner's garden or obtaining deer-proof netting or a video describing Benner's low-maintenance approach to shade gardening, call Benner's Gardens Inc. at 800-753-4660.

Letters to the Editor

Swiss Pines — A Correction

A visitor to our garden was kind enough to bring to us a copy of the July '97 *Green Scene*. Our garden was mentioned in the article — Japanese Gardens: The Possibilities for Delaware Valley Gardens.

I wish to correct your statement that Katsuo Saito is the designer of our garden. That is not so. As a matter of fact, there never was a design as a whole. Mr. Arnold Bartschi built this garden as a hobby, section after section, copied from books of gardens in Japan. Almost all stone settings were done by Carl Shindle, who was hired by Mr. Bartschi in 1962, and who still works for us, improving, building authentic gates, bridges, etc.

The only contribution Mr. Saito made to our garden is the small area after the Zen garden (1967), and the front yard of our Tea House (1969). Mr. Bartschi, who passed away last year at the age of 92, deserves all the credit for this garden.

Henriette Bumeder
Manager, Swiss Pines
Charlestown Rd., Malvern, Pa.

What Do the Brits Have That We Don't

Your article "What Do the Brits Have ... That We Don't?" Sept./Oct. '97, by Jane Reed Lennon, was one of the most amusing ones I have ever read. So true! I don't know how many plants I have killed (and money lost!) trying to have an English garden. Just this summer ... *Polemoniun* 'Brise D'Anjou' from Bressingham!

We really do have so many wonderful natives, and I believe we are *beginning* to realize this and appreciate them.

THE PLANTFINDER

A free service for *Green Scene* readers.

If you can't locate a much wanted plant, send your name and address (include ZIP), the botanical and common name of the plant to Plant Finder, *Green Scene*, PHS, 100 N. 20th Street — 5th Floor, Philadelphia, PA 19103-1495.



I feel better knowing some of the reasons we can't have these beautiful herbaceous borders. I never thought about the fact that they have so many more daylight hours.

I loved this article and Jane Lennon's wit and humor.

Nancy Cole
Baltimore, Md.

Taking Herbert Seriously *Green Scene*, May/June 1997

I was very interested in Helen Brunet's article because of my own plant. No one has ever really identified it for me.

I started mine from one small piece and, over the years, it has grown so large, we call it the Monster. The difference between "Herbert" and my plant is the color of the blossoms — mine are a deep pink. My sister (in Chicago) has a similar plant and its blossoms are red.

Benita Pols
Jenkintown, Pa.

Editor's note: We publish letters we receive when appropriate and when space permits. We do have a policy, however, of not publishing anonymous letters.

Oh Dear, the Deer Again

In your Sept./Oct. issue, "Gardening the Woods" writer Adam Levine was com-

plaining, as most of us have, about the deer who help themselves to the choicest bits of new growth.

There is a simple way to rid your garden of deer without using traps or chemicals. Put in some onion sets among your plants, and they will be hidden by thicker foliage but still keep away the deer. A sprinkle of garlic seed works just as well.

Phyllis Simpson
Haverford, Pa.

Gardening Gloves*

The best gardening gloves I've discovered allow me to *feel* what I'm doing and so I like using them. At \$2.00 a pair at most pharmacies I love them and they go through about six washings, not bad for knit cotton. When I'm dealing with mud I take them off and put on a second pair, most of the time.

If you hate having dried skin and nails that catch on things, take the time to: scrape soap underneath your nails beforehand, put olive oil on after washing up and then dig into a lemon half. Get familiar with a milder emery board and a chamois nail buffer. Buffing the *edge* of your nails smooths roughness not always visible.

(*November '95 *Green Scene*, p. 20-21, "Preserving Our Resources: The Care of a Gardener's Hands," by Cheryl Monroe.)

Millie Nichols
Marietta, GA

An Invitation to Plant Societies

Send Us Your Plans for 1998

If you are an area plant society holding a plant sale and/or a major event between March 1, 1998 and December 31, 1998, let us know. We will publish that information in the March 1998 issue of *Green Scene*. Send the information to Erin Fournier (*Green Scene*, 100 N. 20th St., Phila., PA 19103-1495.) **Deadline: Nov. 20, 1997.** Please use the following format:

NAME OF CHAPTER AND SOCIETY: _____

	Event #1 — Major Event	Event #2 — Plant Sale
Name of Event	_____	_____
Dates	_____	_____
Time	_____	_____
Location	_____	_____
(full address)	_____	_____
Fee, if any	_____	_____
Contact person	_____	_____
Address	_____	_____
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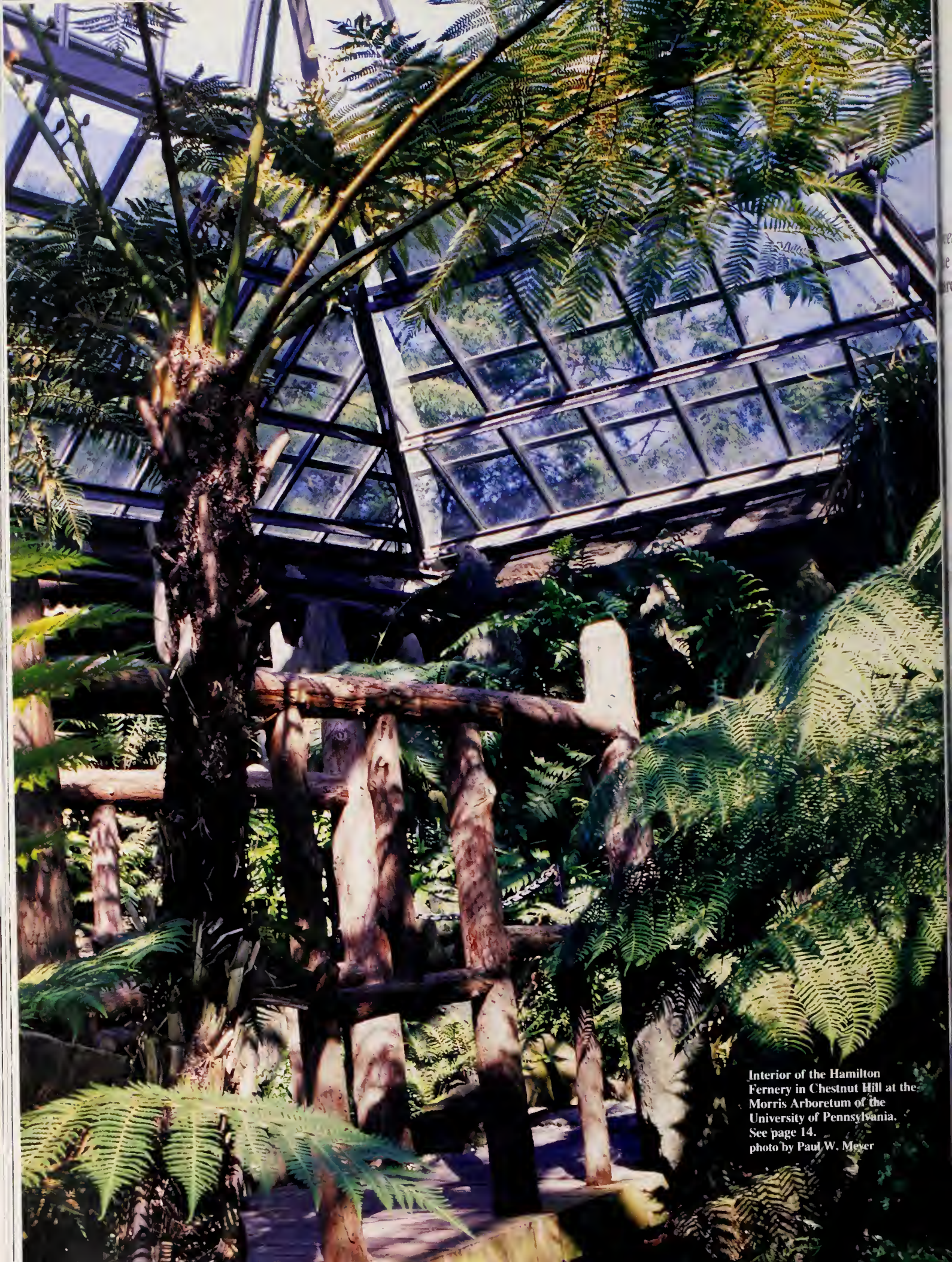
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Interior of the Hamilton
Fernery in Chestnut Hill at the
Morris Arboretum of the
University of Pennsylvania.
See page 14.
photo by Paul W. Meyer

La Passion du Jardin

Green Scene Visits
the Philadelphia Flower Show
March 1-8, 1998



*Claude Monet and Lavender Dream
from "Roses, mon carnet d'émotions"
by Henri Delbard*

GREEN SCENE

THE PENNSYLVANIA HORTICULTURAL SOCIETY • Special Edition \$3.00



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The Philadelphia Flower Show

Produced by
The Pennsylvania Horticultural Society
Presenting Sponsor: PNC Bank
"La Passion du Jardin"

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Group tickets may be purchased by mail through February 16, 1998. Minimum 10 adult tickets or (\$155.00).

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Front Cover: Aquarelles by Fabrice Moireau
from *Roses, mon Carnet d'émotions*"

by Henri Delbard published in France: Editions
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Grow with us.

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the green scene / january 1998



From Henri Delbard's book *Roses, mon Carnet d'émotions*; Aquarelles by Fabrice Moireau. Delbard is one of the Show's Central Feature exhibitors.

Green Scene Goes to the Philadelphia Flower Show

by Jean Byrne

The Philadelphia Flower Show, produced by the Pennsylvania Horticultural Society, is the largest and best attended indoor Show in the world. The Show is unique, not only because it is produced out of season, but because it is a formidable blend of professional landscapers, growers, florists, other commercial interests and amateur competitive exhibitors. And I use the word amateur with its truest meaning — the Latin amator, lover. It is a Show that is created out of a love of horticulture; its goals are to enchant, to entertain and to educate.

In the past, in addition to the committed and passionate core of area exhibitors, exhibitors have also traveled from Africa, Asia, Holland, Great Britain, Italy; this year the Central Feature will welcome the talents of three French exhibitors — the owners of Villandry, Henri and Angélique Carvallo; rose breeder Henri Delbard; culinary expert Anne Willan; and The Friends of Vieilles Maisons Françaises. Judges, too, will be coming from distant places. We call on more than 300 experts to help rate the exhibits — all a part of the educational process of the Show. And Show visitors will be greeted by hundreds of volunteers; how we wish you could see the remarkable behind-the-scenes work done by the almost 3,500 volunteers who help with staging, set-up, nomenclature, the Preview Dinner, recruiting volunteers and shepherding them through the process from pre-Show registration, parking, to loading and unloading precious exhibits, to dealing with winning and with losing.

Two years ago, when PHS moved the Show from its 30-year-old home at the Philadelphia Civic Center to Center City's Pennsylvania Convention Center, we were thrilled with the history-making audience of 301,000 visitors. In 1997, our second year at the site, we welcomed the second largest crowd in our history.

Over the past year, we have been involved in Strategic Planning for the Society's future development. We are committed to continuing to create the opportunity for our area exhibitors to show the world what they can do and to maintain and continue to build our Flower Show audiences. This year we received an offer we couldn't refuse: the *Philadelphia Sunday Inquirer* offered to print and distribute to its million and a half readers a Philadelphia Flower Show Program two weeks before the Show, and the *Philadelphia Daily News* will distribute 200,000 on February 26. In addition, copies of the Program will be available for sale at the Flower Show. What an opportunity to bring our story to a broader public.

In planning for the *Program*, we realized that some of our *Green Scene* readers who live out of the area have not been to the Show, and even many of those who have, might not know how we put the Show together. So we planned this issue, our largest ever — we added 16 pages — as a tour of what goes on behind the scenes and what's coming this year. We hope you enjoy it, and we invite you to join us at the Show.

The 1998 Philadelphia Flower Show
Sunday March 1 through Sunday March 8

Le Printemps Vient à Philadelphie

Spring Comes to Philadelphia

The people behind the passion

 by Judy Mathe Foley



Paul Cezanne

The Philadelphia Flower Show plans begin years in advance. Here's how the designer drew the '98 Show together.

Paul Cezanne, Claude Monet and Marcel Proust will all be there. They're coming to Philadelphia from Henri Delbard's private rose garden at his country home in Bois de Sauzet, France, to form "un bouquet de couleurs et de parfums" for the Central Feature at the 1998 Flower Show. It will be printemps in Philadelphie when "La Passion du Jardin" opens at the Pennsylvania Convention Center in March.

"When Americans think of French gardens, we think of Versailles with its topiary, formal, clipped gardens and gilded statues, and that style will be represented in the Show," says Ed Lindemann, Shows designer and director. "France also has dramatic, contemporary gardens whose chief characteristic is the bold use of vibrant colors. You'll find those gardens there, too."

From the Loire Valley's Château de Villandry, Henri Carvallo will share his potager, or kitchen garden, built in the 19th century by his Spanish great-grandfather and American great-grandmother. An exhibit in 6,000 sq. ft. at the Convention Center will, as Carvallo says, "take the spirit of" Villandry's potager, which consists of nine large squares that cover two and one-half acres and contain 312 small beds. Like its larger counterpart, the Flower Show's potager will be planted with both vegetables and flowers in geometrical beds.

Aquarelle by Fabrice Moireau from *Roses, mon Carnet d'émotions* by Henri Delbard published in France; Editions Georges Delbard, S.A., Editeur. Published in United States as *Diary of a Rose Lover* by Harry N. Abrams, Inc., 100 Fifth Ave., New York, NY.

photos by Jean Baptiste Leroux



Today, Henri and Angelique Carvallo oversee the Château de Villandry in France. They will both be at the Philadelphia Flower Show during the final stages of set-up for the Central Feature exhibit, *Villandry*, until the Show's closing. Henri has worked closely with Show staff on the development of the exhibit via fax and phone for many months. Henri is the great-grandson of Joachim Carvallo and Anne Coleman who recreated Villandry in the early 1900s, uncovering traces of 16th century terraces and adding new levels to the garden. Later, their grandchildren, Henri's parents, Marguerite and Robert Carvallo, continued to bring the garden to life after a period of neglect. Today, Henri and Angelique continue their work.



Floral designer Jamie Rothstein will create five 16-ft.-high flower arrangements for a 60-ft.-long impressionistic view of Versailles' trademark Hall of Mirrors. Members of The Societe d'Horticulture des Yvelines in France will help decorate a country kitchen and formal dining room for the culinary presentation of the vegetables and fruits from the tasty and vibrant palette that is French gardening.

Friends of Vieilles Maisons Françaises (Old Houses of France) helped provide sources and information for the 30,000-sq.-ft. Central Feature, that will also include statuary from Philadelphia's Rodin Museum, which itself replicates its French counterpart in Paris.

Although American tastes for all things French have grown in recent years, spurred on by increased interest in fresh foods and the publication of the bestselling book, a *Year in Provence* (Peter Mayles, Vintage Books, N.Y., 1991), this is the first time the Philadelphia Flower Show has featured France. "La Passion du Jardin" will help



PHS Shows' designer/director Ed Lindemann adjusts the Versailles Hall of Mirrors Show model. The wooden structure to the left is a model for The Friends of Vieilles Maisons Françaises exhibit; both exhibits will be part of the larger Central Feature, which also includes Villandry, La Varenne, and Henri Delbard's rose garden as well as the Rodin Museum garden and the Academy of Natural Sciences Lewis & Clark exhibit.

photo by John C. Gouker

Flower Show visitors think, plant, eat, and experience the joie de vivre the French find in food and flowers from the garden to the table.

Tracking down the French connection

The annual glory that is the Philadelphia Flower Show is an extravaganza that springs from the fertile mind and pencil of Shows designer and director Ed Lindemann. When he sits down at his drawing board, extraordinary things happen: a garden from 17th century Pitmedden in Scotland grows indoors in 20th century Philadelphia; a life-size Dutch windmill springs up surrounded by a profusion of blooming bulbs; lush, brilliant orchids of Barbados and Bermuda create a tropical fantasy island in the middle of a blustery, not-at-all tropical March.

When you've produced a brilliant Flower Show, what do you do for an encore? Ed Lindemann isn't troubled by that question because he works at least two shows simultaneously, so the next one is always on his drawing board. This past fall, as he put the final touches to "La Passion du Jardin," that drawing board already sported a penciled-in layout of "Design on Nature" for 1999. He's been working on it since 1996. Flower Show themes are already chosen through the year 2004. Each one builds on itself as the people Lindemann meets through one Show become resources for another.

Ed Lindemann has designed 19 Flower Shows and each of the themes "come out of my brain, so each year I've used that much more of it, and it gets harder and harder." To get other brains involved, he and Show manager and Society president Jane Pepper gather together "people who think creatively." Once ideas are harvested, Lindemann sets about tracking down people who can carry them out.

His favorite Show was "Islands in the Sun" in 1994. "The winter was perfect. That year we had lots of snow and it was a perfect time to highlight the tropical climates of Bermuda, Barbados and Puerto Rico," and the people involved in that Show were as warm and friendly as the climates from which they came.

His worst nightmare was "Hometown, USA" in 1986 in which thousands of dollars worth of water lilies in a pond in the Central Feature failed to produce a single bloom. Lindemann hadn't realized that it would be impossible to get the large indoor body of water warm enough to force the

water lilies into bloom. It was an expensive lesson, and the only water lilies that have been in any Show since were made of bronze.

For this year's Show, five years in the making, Lindemann made three trips to France, tracking down leads from Friends of Vieilles Maisons Françaises (Old Houses of France) and the Philadelphia-based French-American Chamber of Commerce.

In Genoa, Italy, at EuroFlora, the largest flower show in Europe, Lindemann and Pepper met Nicole Duquesne of the Garden Club of Versailles whose members will provide table decorations that will set the scene for the special "chateau cuisine" eating/cooking events presented during the Show by Anne Willan, who founded La Varenne, a cooking school at Château du Fey in Burgundy.

"Anne Willan came to a conference in Philadelphia, and we formed an instant friendship," says Lindemann. "I got out a couple of pieces of paper and roughed out a plan" for the three-part portion of the Central Feature, which has a kitchen garden where the **Product** is grown, a French country kitchen to display the **Preparation**, and a dining room to feature the **Presentation**.

What attracts Ed Lindemann to the French garden style is its "unusual combinations of flowers and vegetables, and especially the gutsy, bold colors."

Flower Show visitors, he says, can see how the French combine plants they might never have thought to combine — chard planted with pink begonias, for example. "So even though they don't have access to huge areas like Villandry, they can look at the combinations and plant them in a pot or in their back yards."

Although Flower Shows have become increasingly international in theme, "we've never done French gardens before," and Lindemann is particularly happy about the United States/French connections this Show will highlight.

Villandry: of cabbages and kings

"We have quite a lot of links with America. Five years ago we had a gathering, and we had 60 American cousins here," says Château de Villandry owner Henri Carvallo, an engineer who attended school in the United States, and took the reins of Villandry in 1993.

The Villandry connection with America began at the end of the 19th century when

photo by Château du Fey



Anne Coleman from Lebanon, Pennsylvania, met a Spaniard, Joachim Carvallo, in Paris. They married, and in 1906 bought a chateau in the Touraine on a site where in 1189 King Henry II of England pledged homage to the French King Philippe Auguste, and in 1532 King Francois I's Secretary of State built what was to be one of the last of the Loire chateaux. It acquired the name Chateau de Villandry in the 17th century.

Using Anne Coleman's money and Joachim Carvallo's manual labor and prodigious research skills, the Carvallos uncovered traces of 16th century terraces and recreated the main axes of today's garden. Joachim built three levels on which he created a Water Garden, a Jardin d'Ornement, and a Potager.

Of the three plots, Joachim Carvallo loved best the potager, thinking of it as "a well-laid table" with the decorative colors of the flowers and vegetables being as important as the neatly organized rows.

Because many French gardens were redesigned in the 18th and 19th centuries to conform with the English romantic park design, Villandry's colorful 16th potager is the only one that still exists. It differs from gardens like Versailles which, Henri Carvallo says, are designed to "take the view away," because its nine closed squares are ornamental in their own right and "don't



photo by Jean Baptiste Leroux

Left: Anne Willan, founder of La Varenne, a cooking school at Château du Fey in Burgundy, France, will travel to the Philadelphia Flower Show to showcase her culinary talents at the three-part exhibit, which will feature the ultimate country kitchen, a lavish garden and a formal French dining room.

Right: Standard roses, a Villandry landmark, in the Potager.

open on the country.”

The potager’s nine vegetable patches are identical in design, all edged with boxwood, and then planted two times a year, first for a spring garden and later a summer vegetable garden. Each plot of vegetables is surrounded by border flowers, which soften the hard, formal edges of the boxwood borders. Each of the patches has 16 quenouille trained pear trees, 40 cordon apple trees and 36 standard roses.

A strong, independent woman of her day, Anne Coleman Carvallo was followed at Villandry in more contemporary times by another strong, hard-working woman, Marguerite d’Estienne d’Orves-Carvallo, who for 20 years tended what Gillian Mawrey, writing in *Hortus*, called “one of the greatest creations of all garden art.”

Marguerite Carvallo, who died in a car accident in 1992, and her late husband Robert brought the garden back to life again after a period of neglect. She, with the help of six gardeners, was responsible for planning the plots, and planting, pruning, weeding and tending the potager which requires 15,000 flower plants and 60,000 vegetable plants in spring and 30,000 in summer or approximately 120,000 plants per year.

All the elements of the potager must be coordinated as to crop rotation, blooming season, height and yield, and color com-

binations. For example, “one must avoid planting pimentos and tomatoes alongside one another because their leaves are of roughly the same color. An attempt is made to accentuate the contrasts — the jade green of the carrots with the blue of the Solaise leeks or the red of the beetroot leaves and the golden green of the celery.”

Weeding must be done by hand because chemicals would be incompatible with the presence of the boxwood hedges. And though it’s all time- and labor-intensive, “nothing that we do,” says a Villandry brochure, “would be outside the scope of a good amateur gardener.”

The real difficulty at Villandry lies in the scale of the work — not only the sheer size, but also the fact that all the flower and vegetable plants are annuals, so all the patches start from scratch each year.

Added to that is a layout that is completely unforgiving. The stepped terraces provide an overhead view of the gardens, so “the slightest irregularity of growth or the presence of a few weeds irresistibly attracts the eye. If we get just one week behind — or even 24 hours when dealing with pests — during the critical period, the whole garden can be compromised.”

Planning for all Villandry’s gardens was Marguerite Carvallo’s work, but says *Hortus* writer Mawrey, “it is for the wonderful potager, its ornamental cabbages

changing color in the autumn frosts, that she will be best remembered.”

Versailles’ Hall of Mirrors demands bold design

“Everything is gilded; everything sparkles,” says floral designer Jamie Rothstein of Versailles, which she visited last summer in preparation for her job of lining the Central Feature’s Hall of Mirrors with flowers. “I really wanted to see Versailles in person to inspire myself, to get the feel and flavor of it. I walked into the Hall of Mirrors and thought, ‘Wow, it really is one of the wonders of Europe.’”

“Since it was August when I visited, Versailles was mobbed with tourists. You literally got pushed along with the crowd. There must have been 600 people in the Hall of Mirrors, but it’s so immense and so magnificent that except for the noise of conversation, you would have thought there were just a couple of people in there.”

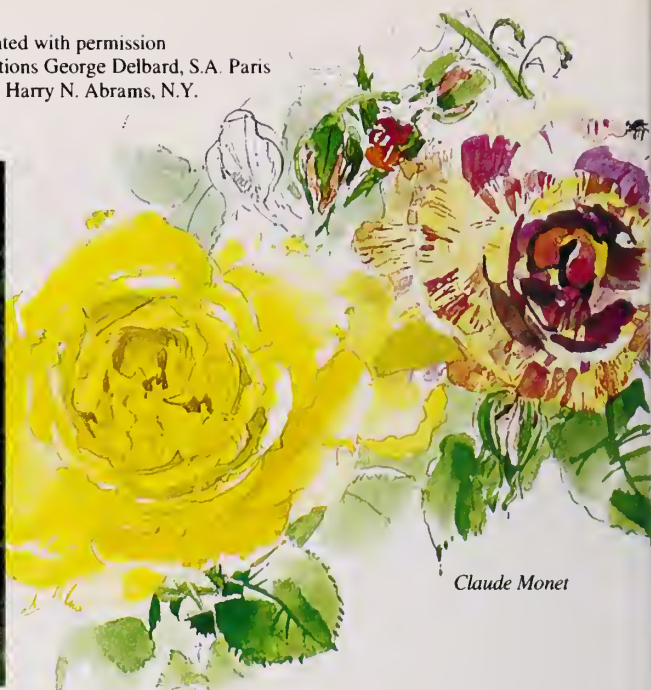
That tour convinced Rothstein that for her Flower Show arrangements she “couldn’t do puny things. Everything has to be over-sized, over-scaled.” Using bold colors with jewel-tones such as crimson and raspberry, she will create arrangements in urns on pedestals so the flowers will start at eight feet and tower 16 feet in the air.

Rothstein, a self-described flower maven who provides flowers, linens, lighting and

photo by Henri Delbard



Henri Delbard's Rose Garden at his country home in the Berry region in France. The Petit Maison and Rose Garden will be replicated as part of the Show's Central Feature.



Claude Monet

Souvenir de Marcel Probst

staging for private and corporate parties, is working on her 12th Flower Show. "I spent three days climbing up and down scaffolding to install 80 feet of flowers for the entrance arbor at the last two Flower Shows," she says. "It will be nice to be working on the ground again."

The five Rothstein creations for the Hall of Mirrors will use "thousands of stems," which will have to be watered each day, but which still will have to be replaced mid-Show. "I'm working with a perishable product, and I remember one Show where there were cannister lights on the floor that shone into the arrangements and literally fried the flowers."

Some of her flowers — probably tulips, viburnum, lilacs — will come from France and the European flower market. All the arrangements "will reflect a French feel."

Rothstein's only regret about Flower Show arranging is that in late February it is not always possible to get the variety and flower size available at other times of the year. For this Show, she will need tall stems with huge heads to capture the bold and vibrant colors she needs. She mentions the rose 'Henri Matisse' as a "great laster," and 'Madame Georges Delbard' for its vibrant, intense reds. In this year of the Frnech, Rothstein's creations will share space with the creator of those roses — the Delbards of France.

The roses talk to us

From the Delbards, père and fils, came the 1998 Philadelphia Flower Show's theme. "La Passion du Jardin" is the subtitle of the Delbard horticultural mail-order catalog begun 61 years ago, the first of its

kind in that country, by Georges Delbard, père. *A Passion for Roses* is the title of a book by his son Henri Delbard, whose personal passion for roses and their perfumes will be part of this year's Central Feature.

Henri Delbard, a rose breeder and hybridizer like his father, has designed an exhibit that will allow visitors to enjoy roses with all their senses, an experience Delbard calls a "degustation de parfumes," a tasting of perfumes, a chance to let "the roses talk to us."

Delbard waxes Gallic on roses and the happiness they provide. Of the yellow rose 'Graham Thomas', Delbard advises: "Like a hunting dog, go sniff the fragrances hidden behind every petal. You will then imagine yourself transported to the middle of woods, more precisely into a day of autumn just after a rain with a warm sun warming up the soil, the moss, the lichen and the mushrooms. My rose of the woods."

In a 1968 marketing visit with rose hybridizers in California, Delbard was captivated by the colors of roses he found there. When he returned to Paris he attended the opening of the Musée D'Orsay, where he was struck by the connection between French impressionist painters and the roses he had seen on the other side of the Atlantic. In his book, *A Passion for Roses*, Delbard describes how he named the "Roses de Peintres" — Monet, Gauguin, Cezanne, Matisse and Souvenir de Marcel Proust.

Delbard says the artist Claude Monet sought effects that varied constantly, "the

*Issued in France as *Roses mon Carnet d'émotions*.

same as this rose in which the colors change from one flower to another." The red and yellow rose Delbard named after him opens in a "bud that might be born carmine red and then this color softens as the other colors arrive. It is a rose Claude Monet would have liked to have had at Giverny," says Delbard.

"You must definitely plant a Paul Gauguin in your garden," says Delbard. "The red, the violet, the peach follow in unforeseeable order from bud to flower. What an unforgettable sight!"

The oranges, reds and ochres of the rose Paul Cezanne are warm and light, like certain of Cezanne's paintings. Delbard says the pigments of the rose Paul Cezanne vary with the intensity of the sun "in infinite and capricious touches of colors," and have intense, but soft and subtle perfumes.

The Delbard catalog offers customers "Le Garantie d'un vrai producteur." That label of a "guaranteed true producer" might also be applied to the annual Philadelphia Flower Show. The passionate French floral connection which opens at the Convention Center in March will surely live up to that reputation.


For information about The Philadelphia Flower Show see the inside front cover of this issue of *Green Scene*.

Judy Mathe Foley counts a 1987 visit to Villandry's gardens as among the most pleasant of her visits to France over a period of years.



LEWIS & CLARK

The Philadelphia Story

 by Elizabeth P. McLean

They traveled 8,000 miles on foot, by canoe or keelboat, and on horseback. They risked their lives traveling over plains, over treacherous mountains and over rivers. It took the 42 men recruited by Lewis and Clark 28 months to make the round trip (1803–06) to explore and record areas of the Louisiana Territory, which more than doubled the size of the United States. Checking that territory, newly purchased from France, was the ostensible reason for the journey, and Thomas Jefferson's vision of finding an all-water trade route to the Pacific, "galvanized Jefferson into manic activity and changed Meriwether Lewis's life overnight."*

The expedition was an extraordinary feat of leadership, and as its 200th anniversary (2003–2006) approaches, interest in their journey through uncharted territory has been revived. Visitors to the Philadelphia Flower Show will have the opportunity to explore representations of landscapes Lewis and Clark's Corps of Discovery traversed, surrounded by the same species of wildflowers and grasses they collected. The Academy of Natural Sciences exhibit, part of the Show's Central Feature and the Academy's observation of the anniversary, celebrates the journey, that interestingly, begins and ends in Philadelphia.

The exploration of the American West had been a dream of Jefferson's long before he was President. When, as President of the United States, Jefferson asked his then secretary Captain Meriwether Lewis to

At the Philadelphia Flower Show

Jefferson's Vision: The Botany of Lewis and Clark will be the first exhibit of the Academy of Natural Sciences at the Philadelphia Flower Show as part of the Central Feature. Against a backdrop of the Bitterroot Mountains, visitors will see recreated "Traveler's Rest," Lolo Rocks, and nearby areas that Lewis and Clark visited. Most of the plants, from *Lewisia* to *Clarkia* to *Purshia* have come from Montana, but some were raised at the Thomas Jefferson Center for Historic Plants at Monticello.

Academy of Natural Sciences
of Philadelphia
1900 Ben Franklin Parkway
Philadelphia, Pa.
Exhibit Chair: Sean B. Duran
Phone: 215-299-1086
email: Duran@say.acnatsci.org
Fax: 215-299-1028

undertake the "most coveted command in the history of exploration of North America, Jefferson was confident that he had the right man."* (See sidebar.)

It was only natural that Jefferson sent Lewis to Philadelphia to be trained and outfitted for the journey. Then the largest city in North America, Philadelphia was also its scientific capital. It was also the home of the American Philosophical Society, America's oldest scientific organization (founded, of course, by Benjamin

Franklin). Jefferson had become a member in 1780, and it was to distinguished fellow-members that Jefferson sent Lewis, writing them even before the Louisiana Purchase went through.

Early in April 1803, Lewis went to Lancaster, where Andrew Ellicott, astronomer and mathematician, taught him the use of sextant, chronometer and other instruments essential to the mapping of this great unknown territory. By the time Lewis arrived in Philadelphia, in May, the Louisiana Purchase had been completed. Then, Robert Patterson, brilliant professor of mathematics at the University of Pennsylvania, continued Lewis's map-making education.

Dr. Benjamin Rush, whom Lewis visited at his home at 4th and Walnut Streets, gave Lewis a list of medical counsels (such as suggesting they lie down "in a horizontal position" for two hours if fatigued after long marches!), and advised on medical supplies including mercury for syphilis, and pills under patent to Rush called "Thunderclappers," good for all kinds of ills, and especially good as a powerful purgative. He also gave a long list of questions about the "Physical History, medicine, Morals and Religion [sic] of the Indians." Dr. Caspar Wistar, professor of Anatomy at the University of Pennsylvania and respected authority on fossils, was another Philadelphian who advised Lewis.

Benjamin Smith Barton at the University of Pennsylvania, the first professor of Botany in the United States, gave Lewis a crash course in the subject. (Barton was the most distinguished botanist of the period, but it could not have hurt that he had

**Undaunted Courage*, Stephen E. Ambrose, Touchstone Books/Simon & Schuster, N.Y./copyright 1996, Ambrose-Tubbs, Inc.

named the lovely twin-leaf *Jeffersonia diphylla* nine years earlier.) Barton loaned Lewis Antoine LePage du Pratz's *The History of Louisiana*, but Lewis had to pay \$6 to buy Barton's newly published book, *Elements of Botany*. From Barton, who lived at 44 N. 5th Street, a few steps from Independence Hall, Lewis also learned how to preserve plant and animal specimens for scientific study.

Lewis not only honed his intellectual skills in Philadelphia for the trek west, but it was also here that he bought his important supplies — 2,200 pounds in weight. To plan for supplies for a party of up to 42 persons, for what was expected to be a two-year trip into the unknown, was a daunting task. He included surveying instruments (purchased with the advice of Patterson and Ellicott), food (including 193 pounds of “portable [dried] soup”), clothing, camping gear, rifle powder, and Indian presents (blue beads were the best choice). The total cost was \$2,160.14 — and Congress had only budgeted \$2,500 for the whole expedition.

Lewis then returned to Washington, whence he wrote to Lieutenant William Clark asking him to be co-commander, creating a joint leadership against all military tradition. Because the two men balanced one another so well, however, in temperament and skills, their extraordinary teamwork was responsible for the success of the expedition. They were perfect leaders.

Lewis left Washington July 5, 1803, the day after the purchase of the Louisiana territory was announced, spent more than a month in Pittsburgh supervising the building of an iron boat (which proved a disappointment), and reached Cincinnati the end of September. There he stopped to examine the fossils at Big Bone Lick, probably at the suggestion of Caspar Wistar. Lewis purchased further supplies en route; he also gathered recruits, as did Clark, who joined Lewis at Louisville. The Corps of Discovery, as Lewis and Clark named their intrepid band, then settled in for winter quarters above St. Louis in December. There they first saw the osage orange (*Maclura pomifera*) and observed the Osage Indians.

The osage orange was later named for William Maclure, geologist and patron of science, president of the Academy of Natural Sciences 1817–1840. The French called it “*bois d'arc*,” because it was used for bows; our word Ozark comes from the same source. There are several old osage

—Thomas Jefferson
on Meriwether Lewis

“Of courage undaunted, possessing a firmness & perseverance of purpose which nothing but impossibilities could divert from it's direction, careful as a father of those committed to his charge, yet steady in the maintenance of order & discipline, intimate with the Indian character, customs & principles, habituated to the hunting life, guarded by exact observation of the vegetables & animals of his own country, against losing time in the description of objects already possessed, honest, disinterested, liberal, of sound understanding and a fidelity to truth so scrupulous that whatever he should report would be as certain as if seen by ourselves, with all these qualifications as if selected and implanted by nature in one body, for this express purpose, I could have no hesitation in confiding the enterprize to him.”

Their return trip, while somewhat quicker than the trek west, was just as arduous: slogging through deep snow at Lolo Pass in midsummer; more grizzly bears (one took 10 bullets to kill); sometimes reduced to eating dogs or horses.

orange trees growing in the church yard at Old St. Peter's Church at 3rd & Pine Streets. They are presumed to have been planted shortly after Lewis and Clark's return, since Bernard McMahon's nursery, where the seeds were grown, was nearby.

Their adventures for the next two and a half years have filled many books, most of which, understandably, emphasize the incredible difficulties. Whether fighting grizzly bears, Indians, weather, or starvation, however, they kept up their observations. Congress may have been interested in the mapping of the new territory, but Jefferson was particularly interested in the natural sciences. At the end of a long day, Lewis would be pressing plant specimens, cleaning bird and animal skins, and (along with Clark and several others) making notes in his journal.

The Corps of Discovery officially started their expedition from St. Louis on May 14, 1804. With a 50-ft.-long keelboat (which could hold 10 tons of supplies), a large pirogue and six small canoes, they made their slow way up the Missouri. (The trek almost came to a quick end, when unfriendly Teton Sioux made a serious attempt to stop them.) They crossed the Great Plains, with “immense herds of Buffaloe, deer

[and] elk . . . in every direction,” and reached North Dakota, where they spent their second winter among the Mandan Indian. In March 1805, a small detachment returned to St. Louis, sending 16 cases of articles back to President Jefferson — maps, animal skins, pressed plant specimens — even a live prairie dog. They also sent seeds of “Mandan corn” (a particular variety of *Zea mays*), which Jefferson planted at Monticello, and which is being grown in his restored vegetable garden today.

Now numbering 33, including York, Clark's black slave, the Shoshone Indian “bird-woman” Sacagawea, her French-Canadian interpreter husband and new baby, the Corps of Discovery proceeded. They crossed the Divide in western Montana. They were now in Sacagawea's homeland, the country of the Shoshone Indians; here she was reunited with her brother — the chief. The Corps traded with the hospitable Shoshones for a good supply of horses to cross the “shining mountains.” Here their diet changed from one heavily dependent upon buffalo meat (each explorer ate nine to 10 pounds of meat a day) to one based on dried fish and Camas roots (*Camassia quamash*) — a change that gave them all serious dysentery.

Nothing could have prepared Lewis and Clark for the Rockies. Coming from Virginia and Kentucky, they expected a gentle single spine of mountains. They knew then there could be no Northwest Passage to the Pacific, as had long been hoped for. They also realized that it would be much more than one half-day's portage to the Columbia River. The portage around the Great Falls of the Missouri alone took them a month, each wearing out a pair of moccasins every two days.

After pausing at “Travelers' Rest,” they did make their way through the Bitterroots to the Pacific, and made winter camp at Fort Clatsop, near present-day Astoria. There Lewis worked on his notes and Clark on his map; he estimated they had come 4,162 miles. Their return trip, while somewhat quicker than the trek west, was just as arduous: slogging through deep snow at Lolo Pass in midsummer; more grizzly bears (one took 10 bullets to kill); sometimes reduced to eating dogs or horses; at a disadvantage in trading with the Indians because of a shortage of “gifts,” —they even used the buttons from their uniforms.

On return, after crossing the Continental Divide, Lewis and Clark separated. Lewis



photos by Elizabeth McLean



Top left: *Lewisia cotyledon* var. *heckneri*. The genus was named for Meriwether Lewis, honoring his leadership on the Lewis and Clark Expedition. This variety is beloved by rock gardeners, but tricky to grow in most gardens.

Top right: *Jeffersonia diphylla*, or twin-leaf, named for Thomas Jefferson by Philadelphia botanist Benjamin Smith Barton, who tutored Meriwether Lewis in botany before he undertook the expedition. **Below:** *Gaillardia aristata* or blanket flower, one of the plants collected by Meriwether Lewis in 1806. Its hybrid descendants are now popular in meadow-gardens.

proceeded down the Marias River, and Clark the Yellowstone and Missouri; they rejoined on August 12, 1806, as planned, on the Missouri, below its confluence with the Yellowstone — an amazing feat. Their reunion was marred by the fact that Lewis was now traveling in a canoe lying on his stomach; he had been accidentally shot in the buttocks [mistaken for an elk] by Pierce Cruzatte, their one-eyed translator. On September 23, 1806, “the people gathered on the Shore and Hazzared [sic] three cheers,” when they completed their expedition at St. Louis.

It’s important to remember that Lewis and Clark, although perfect “leader-scouts,” could never have succeeded on their journey without the help of various native Americans. They came in contact with 72 tribes of Indians, some of whom were translators, guides, hosts, teachers about edible plants, and suppliers of horses.

Lewis and Clark collected flora and fauna throughout their two and a half year trip. Unfortunately, except for the boxes sent back from St. Louis in 1804, all the specimens collected on the westward journey perished. They were cached carefully en route below the Great Falls of the Missouri, but Lewis and Clark had not reckoned on the ferocity of spring floods, which washed all away.

Given all their difficulties, it seems miraculous that we do have specimens from their return trip. Their natural history discoveries were enormous. Birds included Lewis's woodpecker, Clark's nutcracker, and sage grouse. Mammals included the pronghorn, the black-tailed prairie dog, the mountain goat, and the big-horned sheep. Except for those items kept by Jefferson and the plant specimens, all the other artifacts were kept in Charles Wilson Peale's museum — housed in what is now Independence Hall.

It is the plants, however, which particularly interest us. It is a long list, which includes the great western conifers: the grand fir (*Abies grandis*), the ponderosa pine (*Pinus ponderosa*), and the Sitka spruce (*Picea sitchensis*); interesting shrubs: the Oregon grape (*Mahonia aquifolium*), antelope brush (*Purshia tridentata*), red flowering currant (*Ribes sanguineum*), salmonberry (*Rubus spectabilis*), the snowberry (*Symphoricarpos albus* var. *laevigatus*) and beautiful flowers: mariposa lily (*Calochortus elegans*), camas (*Camassia quamash*), ragged robin (*Clarkia pulchella*), pink cleome (*Cleome serrulata*), and bitterroot (*Lewisia rediviva*). Most of these were collected in the Idaho/Montana area: Travelers' Rest, Packer's Meadow, Lolo Rocks, Weippe Prairie. More than 200 specimens can be seen now at the Academy of Natural Sciences — over 70 of which were new to science when they were collected.

As the story of Lewis and Clark's expedition had beginnings in Philadelphia, so Philadelphia was part of its completion. The Corps of Discovery returned safely; only one man died — of a burst appendix. (Medical science at that time could not have saved him.) Lewis was supposed to write a full account of the trip for publication, but he put it off. Jefferson made him governor of the new Louisiana Territory, and the let-down after a hero's welcome evidently reinforced Lewis's tendency towards depression; he committed suicide. The responsibility of the journals fell to Clark, who was not a writer — although he could express himself in a lively fashion. About the grizzlies, he wrote: "these bear being so hard to die reather intimdates us [I would] reather fight tow Indians than one bear."



Left: *Clarkia pulchella* illustrated by Frederick Pursh in his *Flora Americae Septentrionalis* (London, 1814), the first book to describe and illustrate plants collected on the Lewis and Clark Expedition. Named for William Clark, co-leader of the expedition. Right: *Mahonia aquifolium* (*Berberis aquifolium*), as illustrated in Pursh's *Flora*. It is named for Philadelphia nurseryman Bernard M'Mahon, whom Jefferson entrusted to propagate the seeds from the expedition.



Fortunately, a brilliant young Philadelphian, Nicholas Biddle,* took over the responsibility of editing the journals. Working with Clark, he published, in 1814, a narrative summary with pertinent quotations, very much in the spirit of the originals. (It was not until 1904 that Reuben Thwaites edited the complete journals.)

Biddle dealt little with the flora and fauna. Benjamin Smith Barton was supposed to write up the plants. Barton was better at directing others, however, and asked Frederick Pursh, a German botanist, to write them up. This Pursh did, but with the death of Lewis, and Barton's failing health, there was little support. Pursh took some of the specimens to England, where he published in 1814, the flora of North America, including illustrations and descriptions of many of Lewis's plants. On one hand, it was underhanded to have taken the specimens; on the other, had he not, it would have been years before the plants of the Lewis and Clark expedition were made known.

Lewis had given some of the seeds to Jefferson, of course. Some went to Jefferson's friend William Hamilton at "The Woodlands" (now a cemetery in West Philadelphia). The bulk went to Bernard McMahon, Philadelphia nurseryman, and author of America's first true garden book, for whom *Mahonia* is named. Hamilton had little success, but McMahon reported

with excitement to Jefferson the new species of such plants as the snowberry, which were appearing in his nursery. Jefferson sent some of the latter to his friend Madame de Tessé in Paris, a connoisseur of art and gardens. Soon Lewis and Clark plants were appearing in contemporary seed catalogs, such as those of John Bartram's successor Robert Carr, who continued Bartram's nursery and garden on the banks of the Schuylkill.

Some of the plants Lewis collected, such as *Lewisia*, which came from alpine meadows, do not do well in Philadelphia. We can certainly commemorate the expedition with *Mahonia*, or that delightful annual, *Clarkia*. As noted, many of the specimens can still be seen at the Academy of Natural Sciences, and the journals can be studied at the American Philosophical Society. The book Barton loaned Lewis, Pratz's *History of Louisiana*, is now at the Library Company of Philadelphia at 13th and Locust Streets. Best of all, "Travelers' Rest" and nearby areas will be recreated with appropriate plants at the 1998 Philadelphia Flower Show in the Academy of Natural Sciences Exhibit, "Jefferson's Vision: the Botany of Lewis and Clark."

Elizabeth McLean, a member of the PHS Council, is a garden historian with "Flower Show" fever. Wearing either her professional or her volunteer hat, she always has a "job" on the floor. She has been project manager for several Flower Show Central Feature displays. This year she is acting as liaison between the Pennsylvania Horticultural Society and the Academy of Natural Sciences for the exhibit "Jefferson's Vision."

*This same Nicholas Biddle went on to become vice-president of the Pennsylvania Horticultural Society (1830-32) and president of the Philadelphia Society for Promoting Agriculture (1831-44).

Rediscovered Rodin Museum Garden Model Reinterpreted at Show

by Lauri Brunton

The Rodin Museum and Garden, which opened to the public in 1929, houses 124 sculptures, including bronze casts of Rodin's greatest works: *The Thinker*, *The Burghers of Calais*, *Eternal Springtime*, and *The Gates of Hell*. It brings together the largest collection of Rodin's work outside of Paris and has the only public French garden in Philadelphia. The museum and garden, itself a beautifully crafted work, are the result of a collaboration whose history has recently unfolded anew.

Betty Greene, liaison for the Friends of the Rodin Museum and Garden, and assistant to the vice president for Operations at the Philadelphia Museum of Art, uncovered an original three-dimensional model of the Museum and Garden. The model describes each detail with precision: tiny sculptures stand in enclaves along the building's outer wall, painted ivy covers the entrance facade, lavender, pink, yellow and orange flowers lay in neat geometric squares in the garden where green rounded hedges are clipped neatly, and a miniature skylight hints at the museum's interior.

The model was built in the late 1920s by the two great neoclassical architects working in Philadelphia at the time, Paul Cret and Jacques Greber. They were commissioned by founder Jules E. Mastbaum to design the Rodin Museum and Garden within a French tradition.

The designers had planned the garden to bloom throughout the seasons with an array of flower colors; today the trees are much taller, the hedges are no longer

clipped into round shapes, and the garden is mostly green.

At this year's Flower Show, Shows designer and director Ed Lindemann has included that color and symmetry in portions of the Museum and Garden as part of the Central Feature exhibit. Rodin sculptures from the Museum will also be on display.

Enjoy the exhibit, then visit the Rodin Museum along Philadelphia's Museum Row, the Benjamin Franklin Parkway. It's truly a wonderful place to enjoy Rodin's breathtaking sculptures and a lovely outdoor spot. Admission is free.

Rodin Museum and Garden
22nd Street and Benjamin Franklin
Parkway

P.O. Box 7646, Philadelphia, PA

www.rodinmuseum.org

Phone: (215) 763-8100

Recording for daily events:

(215) 684-7500

Hours: Tuesday through Sunday
10:00am-5:00pm.

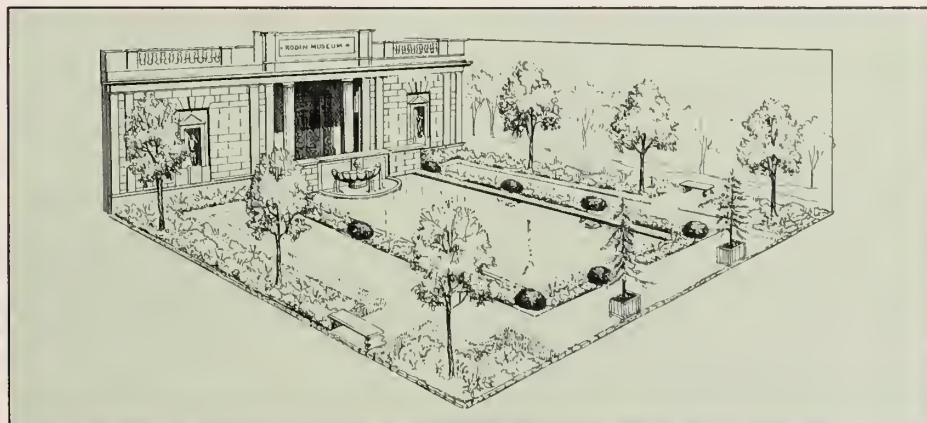
Closed Mondays and Holidays.
Admission is free.

Friends of the Rodin Museum
c/o Development Department
Philadelphia Museum of Art
P.O. Box 7646

Philadelphia, PA 19101-7646

Phone: (215) 684-7750

Lauri Brunton is PHS Publications Associate.



Sketch for Rodin Museum and garden Flower Show exhibit.

drawing by Midge Ingersoll






photo by Walter Chandoha

The Pennsylvania Horticultural Society Salutes Exhibitors in Its 1998 Philadelphia Flower Show

The continuing support of these exhibitors enables the Pennsylvania Horticultural Society to produce the world's finest Flower Show, and we greatly appreciate their participation in our programs and activities.

Academic Educational

Camden County Technical School
Delaware Valley College, Department of
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Environmental Design
Horticulture Academy at Abraham
Lincoln High School
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Agricultural Sciences, Cooperative
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Magazine
Zoological Society of Philadelphia

Nonprofit Display

African Violet Society of Philadelphia
American Ivy Society
American Rhododendron Society,
Greater Philadelphia Chapter
Camden City Garden Club, Inc.
Delaware Valley Fern and Wildflower
Society
Flora Design Gallery & The Herb Society
of America
North American Rock Garden Society,
Delaware Valley Chapter
Philadelphia Cactus and Succulent
Society

Not in PHS Competition

The Academy of Natural Sciences
Henri Delbard
Ikebana International, Philadelphia
Chapter #71
The Little House Shop
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Pennsylvania Horticultural Society's
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Inc.
Château de Villandry

Horticultural expertise, fine craftsmanship, creativity and professionalism are the hallmarks of our Flower Show exhibitors. We encourage you to seek their expertise according to your needs. See the following pages for where these exhibitors are located year-round.

1998 Philadelphia Flower Show Major Exhibitors

The Academy of Natural Sciences
Central Feature Exhibitor
Sean B. Duran, Museum/Biodiversity
Developer

1900 Benjamin Franklin Parkway
Philadelphia, PA 19103-1195
215-299-1086
(f) 215-299-1028

"Jefferson's Vision: The Botany of Lewis & Clark"

African Violet Society of Philadelphia

Tom Seiler
P.O. Box 518
Ottsville, PA 18942
610-847-8438

"Manège Echante Des Violettes"

Jacques Amand, Ltd.

Elaine Wiggers
P.O. Box 59001
Potomac, MD 20859
301-762-6601

American Institute of Floral Designers
(AIFD)

Rudy Grant and David Siders
1956 Watt St.
Schenectady, NY 12304
518-465-5285
(f) 518-465-5854

"La Passion des Artistes"

American Ivy Society

Pat Hammer
P.O. Box 231208
Encinitas, CA 92023-1208
760-436-0460
(f) 760-436-6869

samiarose@SRTopiary.com
"The Lion's Court"

American Rhododendron Society
Greater Philadelphia Chapter

Ted Stecki
90 Kresson-Gibbsboro Rd.
Voorhees, NJ 08043
609-608-6460
(f) 609-608-6464

"Rhododendron Rapture . . ."

The F.A. Bartlett Tree Expert Company

Anne L. Ferrucci
1290 E. Main St.
Stamford, CT 06902
203-323-1131
(f) 203-323-1129



photo by Walter Chandoha

Far left and above: The live moss and lichens growing atop the 100-year-old shingles in Romano's Landscaping major exhibit, *The Potter's Shed*, were watered nightly to keep the roof fresh at the 1997 Flower Show. Romano's won the Best Achievement Award in the Landscape Category for best spring woodland garden, the Chicago Horticultural Society Medal to an exhibit showing outstanding horticultural skill and knowledge, and the American Horticultural Society Citation.

Joe Bones
P.O. Box 177
Exton, PA 19341
610-594-4740
(f) 610-594-4743

"Le Désert de Retz: One Man's Folly"

Batch-O-Blooms Interior Landscaping

Richard A. Batcho
231 Integrity Ave.
Oreland, PA 19075
215-885-9288
(f) 215-885-2334
"The Conservatory"

Camden City Garden Club, Inc.

Michael Devlin
2993 Tuckahoe Rd.
Camden, NJ 08104
609-757-7038
(f) 609-365-5825
(h) 609-365-5825
"The Three Little Pigs"

Camden County Technical School

Pennsauken Campus
Shawn W. McKay
6008 Browning Rd.
Pennsauken, NJ 08109
609-663-1040 ext 7220
(f) 609-665-8011

"Aquascape: An Education in Water Scaping"

J. Cugliotta Landscaping/Nursery, Inc.

Doug Burgess/Joe Cugliotta
1982 Route 206
Southampton, NJ 08088
609-859-9333
(f) 609-859-2043

"A Palette of Flowers"

Henri Delbard

Central Feature Exhibitor

Henri Delbard
DELBARD
16, Quai de la Megisserie
75054 Paris Cedex 01
FRANCE
(f) 011-33-1-44-88-80-28

Delaware Valley College

**Department of Ornamental Horticulture
and Environmental Design**

John D. Martin
700 E. Butler Ave.
Doylestown, PA 18901
215-489-2244
(f) 215-489-4953

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Philadelphia, PA 19144
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Edison-Furlong Rd. @ Rt. 263
Furlong, PA 18925
(w) 215-794-3018
(h) 215-332-4742
(f) 215-364-6847
(address to Donna Quartucci)
"Cirque du Fleur"

Eberhardt Landscapes & Design, Inc.

Mark Eberhardt
1107 Saunders Ct., Suite 200
West Chester, PA 19380
610-344-9898
(f) 610-344-9899

Elverston Jordan - Haddon Farms

Robb Jordan and Kathleen Elverston Jordan
123 Kings Highway East
Haddonfield, NJ 08033
609-429-4541

U.S. EPA Region III

Charles Rogers/Jeff Lapp
841 Chestnut Building
3AT11
Philadelphia, PA 19107
215-566-2136
215-566-2717
(f) 215-566-2134
"The Nature of Diversity"

Fairmount Park Commission

James A. Donaghy, Director
Timothy P. Gill, Assistant Director of Operations
Operations and Landscape Management
Memorial Hall, West Park
P.O. Box 21601
Philadelphia, PA 19131
215-685-0014
215-685-0015
(f) 215-685-0065
"Romance in the Rock Garden"

Flora Design Gallery & Herb Society of America, Philadelphia and Central Ohio Units

Michael Howell
2148 Bodine Rd.
Malvern, PA 19355
610-827-1268
(f) 610-827-0110
"Sous le Charme du Jardin"
(Under the Spell of the Garden)



J. Franklin Styer's ebullient *Tyres by Styers* was a hit in more than one sense of the word; visitors were consistently drawn to this surprisingly lyrical exhibit. Winning the 1997 Best in Show in the Landscape Category, Styer's unique interpretation of a garden would surely have won the most imaginative use of recycled materials as well if such a category existed.

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215-739-3112
(f) 215-425-3818
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Dale Nemec/Barbara L'Amoreaux
4641 Roosevelt Blvd.
Philadelphia, PA 19124-2399
(Dale) 215-831-4791
(f) 215-831-4789
(Barbara) 215-831-4776
"The Healing Gardens of Friends Hospital"

**Ikebana International
Philadelphia Chapter #71**

Lorraine Toji
550 Main St.
Sewell, NJ 08080
(h) 609-468-2824
(hf) 609-468-5622
(w) 609-757-9719
(wf) 609-964-0254
"Ikebana"

Daniel G. Kepich & Associates

Daniel G. Kepich
Box 152
3425 Holicong Road
Holicong, PA 18928
215-794-5090

Lamsback Floral Decorators

Robert and Karen Lamsback
148 Vine St.
Philadelphia, PA 19106
215-925-0253
(f) 215-925-2845

La Varenne

Central Feature Exhibitor
Anne Willan, Founder and President
Box 25574
Washington, DC 20007

LeRoy's Flowers & Gifts Inc.

Bob LaBold
16 N. York Rd.
Hatboro, PA 19040
215-674-0450
(f) 215-674-2838
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**Horticulture Academy at
Abraham Lincoln High School**

Karen Kardon Weber
Rowland and Ryan Avenues
Philadelphia, PA 19136
215-335-3213
(f) 215-333-8450

The Little House Shop

Exhibitor address:
Spread Eagle Village
503 W. Lancaster Ave.
Strafford, PA 19087

Send mailings to:

Alison Osborne
The Hamilton Greenhouses
165 Eagle Rd.
Wayne, PA 19087
(p) 610-688-3879
(f) 610-688-8564

"Our Garden in Bryn Mawr/Notre Jardin à Senlis"

Mansmann-Liskey Landscape Contractors
Ken Liskey
P.O. Box 55
Chester Springs, PA 19425
610-644-6686
"Formal Expressions"

McNaughton's Nurseries Inc.
William McNaughton
351 Kresson Rd.
Cherry Hill, NJ 08034
609-429-6745
(f) 609-428-6074
"Iron Works"

Meadowbrook Farm
John Story
P.O. Box 3007
Meadowbrook, PA 19046
215-887-5900
(f) 215-886-1971
"A Collector's Passion"

Netherlands American Business Association
Thomas Snyder
3 Wood Hill Dr.
Willow Grove, PA 19090
215-659-3252
(f) 215-830-0595

North American Rock Garden Society Delaware Valley Chapter
Dick Van Duzer
54 Red Hill Rd.
Pipersville, PA 18947
215-766-0808
"Jean Jacques Rousseau Makes a Garden Deep in the Forest"

PECO Energy Company
Jim Backes
2301 Market St., NG-2
Philadelphia, PA 19101-8699
215-841-5583
(f) 215-841-6941

Pennsylvania Bonsai Society
Howard McNeal
420 Lewis Mills Rd.
Honey Brook, PA 19344
610-696-1536

Pennsylvania Horticultural Society's Philadelphia Green
Maitreyi Roy
100 N. 20th St., — 5th Floor
Philadelphia, PA 19103-1495
215-988-8873
"The Pennsylvania Horticultural Society Makes Philadelphia Green"

Penn State University, College of Agricultural Sciences, Cooperative Extension
Nancy Bosold
Montgomery County Extension
1015 Bridge Rd., Suite H
Collegeville, PA 19426
610-489-4315
(f) 610-489-9277
"The Art of Pruning"

Philadelphia Cactus and Succulent Society
Rita B. Hojnowski
517 Cecelia Dr.
Blackwood, NJ 08012-3808
609-227-0599
(f) 609-227-0599
"Old World — New World Garden"

Philadelphia Water Department
Arthur Holst
1101 Market St., 3rd Floor
Philadelphia, PA 19107
215-685-6143
(f) 215-685-6154
"Recreate France in Backyard Philadelphia Using Biosolids"

Le Prince Jardinier
Prince Louis Albert de Broglie
Château de la Bourdaisière
37270 Montlouis sur Loire
FRANCE
(p) 011-33-2-47-50-89-34
(f) 011-33-2-47-45-03-32

Renny - The Perennial Farm
Renny Reynolds
60 Tomson Mill Road
Wrightstown, PA 18940
215-598-0550

Robertson's
Bruce Robertson
8501 Germantown Ave.
P.O. Box 27249
Philadelphia, PA 19118
215-242-6000
(f) 215-247-3393
"The Essence of Provence"

Rodale Institute and Organic Gardening Magazine
Florence Rodale
611 Siegfriedale Rd.
Kutztown, PA 19530
610-967-8556
(f) 610-683-8548
"A Public Family Garden"

Friends of the Rodin Museum Central Feature Exhibitor
Betty K. Greene
Benjamin Franklin Parkway at 22nd St.
Philadelphia, PA 19130
215-684-7712

Romano's Landscaping
Peter Romano
508 Lakeview Ave.
Pitman, NJ 08071
609-589-2806
(f) 609-589-6378
"Solitude"

Rosade Bonsai Studio
Chase Rosade
6912 Ely Rd., Solebury
New Hope, PA 18938-9675
215-862-5925
(f) 215-862-0619

Jamie Rothstein
Jamie Rothstein
313 Cherry St.
Philadelphia, PA 19106
215-238-1220
(f) 215-238-1220

Walter Biddle Saul High School of Agricultural Sciences
Barbara Brown
7100 Henry Ave.
Philadelphia, PA 19128
215-487-4467
(f) 215-487-4844
"The Principle Of It All"

Stoney Bank Nurseries
Jack Blandy
61 Stoney Bank Rd.
Glen Mills, PA 19342
610-459-5100
(f) 610-459-5974
"Le Jardin Variegated"
(A Very Variegated Garden)

J. Franklin Styer Nurseries, Inc.
Michael Petrie and Bayard Williams
914 Baltimore Pike
Concordville, PA 19331
610-459-2400
(f) 610-459-3982
"The Tooleries"

Friends of Vieilles Maisons Françaises, Inc., Central Feature Exhibitor
Jane Bernbach
14 E. 60th St., Ste. 605
New York, NY 10022
212-759-6846
(f) 212-759-9632

Château de Villandry Central Feature Exhibitor
Henri Carvallo
Château de Villandry
37510 Villandry
FRANCE
(f) 011-332-47-50-1285

Williamson Free School of Mechanical Trades
Wayne Norton
106 S. New Middletown Rd.
Media, PA 19063
610-566-1776
610-566-6502
"Nature Never Silenced"

Zoological Society of Philadelphia
G. Rodney Haines
3400 W. Girard Ave.
Philadelphia, PA 19104
215-243-5294
(f) 215-243-5385
"Passion in the Garden"

1998 Philadelphia Flower Show

The Competitive Classes at The Philadelphia Flower Show

The Competitive Classes at the Philadelphia Flower Show have been the breeding ground for an enormous reservoir of horticultural talent. Last year 459 people entered 2,773 exhibits in these classes. Many of the exhibitors come from 95 garden clubs and horticultural organizations in the Greater Philadelphia Region, as well as some from as far away as Texas, Tennessee, Virginia, and Rhode Island. Many exhibitors who come out of curiosity or love of growing have careers in horticulture: arrangers, designers, landscapers. At the Show, they meet a remarkable network of plant lovers that easily develops into a community whose ethos is "share, share, share," share plants and knowledge.

They share with each other and they share principally with the public, whom we know are inspired to reach beyond the ordinary. Their skills range from the novice (never exhibited before) to the thoroughly addicted, whose focus is on the Show throughout the year — selecting, planting, growing and grooming. They grow on windowsills or in elaborate greenhouses. Wherever they grow they have caught the Show fever.

Exhibitors can enter any of the 332 Competitive Classes.

The Artistic — 51 classes

Niches (19); Miniature Arrangements (6); Defined and Open Spaces (6); Room (1); Tables (1); Miniature Settings (2); Designs for Pressed Plant Material (6); Designs for Jewelry (3); Designs for Needle Art (4); Entryway (1); Container Display (1); Collections (1).

Horticultural — 281 classes

Bulbs (72); General Horticultural (54); Hanging Containers (18); Ivy (6); Herbs (15); Special Classes (87); Orchids (29).

Nancy Volpe won the Pennsylvania Horticultural Society Award as the outstanding Blue Ribbon winner in the Orchid Classes on opening day at the 1997 Show for the L.C. 'Coastal Breeze' in the Horticultural Classes.



Competitive Class Entries

Room Entrants

A Room with a Deja Vu

Gallagher Group

Patty Gallagher, Co-Chair
Kevin McIlhinney, Co-Chair

The Junior League of Philadelphia, Inc.

Sustainer Garden Club
Joan Prewitt, Co-Chair
Molly Simmons, Co-Chair

Les Quatre Filles

Vivian Bauman
Molly Carpenter
Diane Salvatore
Estelle Sherman

Delton Lewis & Michael Simpson

The Men's Garden Club of Philadelphia

Michael Petrie, Chair

Pine Valley Garden Club

Victoria C.G. Coates, Co-Chair
Kathleen Fotherall, Co-Chair

Providence Garden Club

Lis Hammons, Co-Chair
Nancy Hayden, Co-Chair

Wissahickon Garden Club

Georgia Doyle, Co-Chair
Bonnie McCausland, Co-Chair



Table Entrants

French Provincial

(The) Garden Workers

Antoinette Jewell, Co-Chair
Lois Veale, Co-Chair

The Gardeners

Cathy Decker, Co-Chair
Michele Spence, Co-Chair

Green Countrie Garden Club

Susan McGinnis, Co-Chair
Jane Pollard, Co-Chair

Maple Glen Garden Club

Judy Finestone, Co-Chair
Margaret Hunter, Co-Chair

Martha Washington Garden Club

Mary Jo Barbie, Co-Chair
Ruth Reller, Co-Chair

Norristown Garden Club

Charlotte Cunningham, Co-Chair
Lynn Potts, Co-Chair

Roots and Shoots

Gayle Rodriguez, Co-Chair
Susan Thompson, Co-Chair

Spade and Trowel Garden Club

Jacquie D'Cruz, Co-Chair
Rachel Morley, Co-Chair



photos by Ira Beckoff

▲ The First place ribbon for this Wissahickon Garden Club entry in the Container Display Class was just one of the ribbons that netted the Club the PHS Artistic Sweepstakes Trophy [as the horticultural organization accumulating the greatest number of points in the Artistic Section] at the final Awards ceremony for the '97 Show. The exhibit, featuring 24 varieties of plants, won kudos from the judges: "Superb educational exhibit enhanced by subtle color harmony." Exhibit co-chairs: Sarah Andrews and Sarah Frank.

◀ **Best of Week in the Defined & Open Spaces Classes:** Sally Humphreys and Betty Webb of the Huntingdon Valley Garden Club created this chic design for the Defined and Open Spaces Global Shopping Class. The judges called the calla lily and ti plant arrangement "A pristine classic."

Competitive Class Entries

photo Pennsylvania Horticultural Society



The Doretta Klaber Award for Best of Week in the Rock Garden Classes to Margaret Bowditch for her *Lithodora oleifolia* in the '97 Horticultural Classes.

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Best of Week in the Small Niche Class to Laura Tietjens Philip for her kalanchoe, croton, orange peel design. "Energetic exchange!," cheered the judges, of the "Syracuse U. - the Orangemen" entry.

photo by Ira Beckoff



Miniature Settings Entrants

Along the River Seine

Challenge I

Susan Foster & Bob Foster
Nance Palladino & Jacqueline Vannozzi
Ginger Peebles
Yvonne Sallade & Susan Lester
Susan M. Steven & Barbara R. Stevens
Catia Whitmore

Challenge II

Jane Gray, Emilie Lapham,
Leslie Purple
Carol MacCluskie, Joann Shinkle,
Arthur Powell
Barbar Olejnik, Sandra Trump,
Ronald Rabideau, Patricia Le Foll
Wanda Morris Simons & Marnie King
M. Jane Smyth & Becky Smyth

Garden Entrants

Romancing the Garden

All Saints Church, Wynnewood
Susan von Medicus, Co-Chair
Jill Miller, Co-Chair
Heinrich & Alberta Depenbrock
Men's Garden Club of Philadelphia
Stanley M.P. Amey, Chair
Lee Cook, Vice-Chair
Thomas Hays, Vice-Chair
University of Delaware
Plant and Soil Science Dept.
Kate Murray, Co-Chair
Cathy Olsen, Co-Chair
Denise Woods, Co-Chair

Entryway Entrants

Celebrations

Countryside Garden Club of Delaware
Barbara Pepper, Co-Chair
Joan Yulduzian, Co-Chair
Lower Merion High School
Liz Amey, Co-Chair
Kate Freeland, Co-Chair
John Mullin, Co-Chair
E. Lynne Freeland, Advisor
Mill Creek Valley Garden Club
Frederica Hammerstrom, Co-Chair
Eileen Krebs, Co-Chair
Cathi Kessock, Co-Chair
Penn Valley Garden Club
Nadine Gorson, Co-Chair
Bonnie Hays, Co-Chair
Eileen Riddell, Co-Chair
Jeanne Van Riper, Co-Chair

Container Display Entrants

"My Passion Is . . ."

Collaboration: Two Artists
Lisa Muller & Paul Pawlaczyk,
Co-Chairs

Huntingdon Valley Garden Club

Bissie Miller, Co-Chair
Nancy Putney, Co-Chair

Island Heights Garden Club

Eve Allison, Co-Chair
Michelle Majors, Co-Chair

Delton Lewis & Michael Simpson,
Co-Chairs

Penn Valley Garden Club

Sandra Spengel, Co-Chair
Suzanne White, Co-Chair

Shipley Sprouts

Kristie Gonzalez, Co-Chair
Jennie Stapleton, Co-Chair
Leila Peck, Advisor

Collections Entrants

Pick a Palette

Dr. Gerald Berad & Beatrice Barad

Garden Club of Wilmington
Elizabeth Denham, Co-Chair
Beverley Rowland, Co-Chair

Inforcers

Linda and Walt Fisher
Barbara and Chuck Gale
Rosemarie and Jules Vassalluzzo

Old York Road Garden Club

Barbara Cox, Co-Chair
Nancy Deibert, Co-Chair

The Outdoor Gardeners

Ruth Almond, Co-Chair
Harriet A. Breuninger, Co-Chair
Rita Precopio, Co-Chair
Mary Roy, Co-Chair

University of Delaware Botanic

Garden Friends

Karin Arentzen, Co-Chair
Susan Foster, Co-Chair

**HOW TO ENTER THE 1999
PHILADELPHIA FLOWER SHOW**

Anyone can enter the
Competitive Classes of The
Philadelphia Flower Show.

The Exhibitor's Guide, the Flower
Show Schedule of Classes, has all
the information you need to enter.
Entry blanks are included.

The Exhibitor's Guide will be
mailed to all members of The
Pennsylvania Horticultural Society
in September, 1998. If you are not
a member and would like to receive
a schedule, write to Competitive
Classes Coordinator, The
Pennsylvania Horticultural Society,
100 N. 20th Street, 5th floor,
Philadelphia, PA 19103-1495.



**Best of Week in the Table
Class** went to the Junior
League Sustainers Garden
Club for their entry in Time
Change: Legendary Atlantis
Beneath the Sea. The club
went from Second place at
the opening of the Show to
First at the Wednesday
rejudging. The judges called
it a "Dynamic discovery of
Atlantis." Exhibit chair:
Joan T. Prewitt; co-chair:
Virginia B. Price.

**Best of Week in the Niche
Class.** They came all the
way from Memphis to enter
"Jagged Edge" in the Large
Niche Class. Peggy Latham
and Marion McDonald of
the Memphis Botanic
Garden & Garden Club's
heliconia's jagged edges
netted raves from three sets
of judges through the week.

photos by Ira Beckoff

Photo by Graydon Wood. Reprinted with permission from the Philadelphia Museum of Art from *Making a Modern Classic: The Architecture of the Philadelphia Museum of Art*.



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Selected Public Landscape Projects

Top left: Plantings in front of the Independence Seaport Museum. Philadelphia Green's Public Landscapes department was hired by Penn's Landing Corporation to rehabilitate and manage the landscape along the Delaware River between Lombard and Market Streets known as **Penn's Landing**. This planting in front of the Independence Seaport Museum illustrates the look of phased landscape improvements being implemented at this major Philadelphia tourist destination under Philadelphia Green's direction. **Top right:** Working with the Fairmount Park Commission, and financed by private contributions, the Pennsylvania Horticultural Society renovated the four-acre **Azalea Garden** adjacent to the Museum of Art in 1989. Hundreds of new trees, shrubs and perennials have been added to extend the Garden's seasons of interest. Philadelphia Green's Public Landscapes department continues to manage a private contractor and a Friends group to keep it looking spectacular. **Bottom:** **The 26th Street Gateway**. Spearheaded by Philadelphia Green, a partnership of private and public groups came together to turn a desolate stretch of industrial highway into a landscaped parkway at the **26th Street Gateway**. A meadow of native grasses and colorful wildflowers now blooms at the corner of 26th Street and Penrose Avenue in front of the Sun Company tank farm. The new plantings have been managed by Philadelphia Green's Public Landscapes department since 1990.



Pennsylvania Horticultural Society's Philadelphia Green Program

*New Visions Continue the Dream into the 21st Century —
A Gallery of Greening*

The proceeds from the Philadelphia Flower Show helps to fund Philadelphia Green's community greening and public landscapes projects. Over the past two and a half decades vision and hard work have brought together communities, funders, volunteers and staff to encourage and support change in blighted neighborhoods and to develop well designed and maintained public green spaces in the City's downtown area and at its gateways. Philadelphia Green's exhibit at the Flower Show tells part of that story.

A major Philadelphia Green project over the past five years has been PHS's partnership with the Fairmount Park Commission and the Philadelphia Museum of Art to transform the public open space around the Museum into a beautiful landscape setting for one of the City's most prominent cultural landmarks. The first new plantings will burst into bloom this spring. Designers are preparing Phase II landscape improvements for the Ramparts and Eakins Oval Plaza.

The Show exhibit features a gallery of selected community greening and public landscape projects set into the Museum's facade.

Other Pennsylvania Horticultural Society Public Landscapes Project Areas

- Ribbons of Gold along Spring Garden Street and Eastern State Penitentiary
- City Hall in Bloom
- Interstate Land Management Corporation landscaped parcels along I-95 through Center City
- Philadelphia Museum of Art Landscape Rehabilitation
- Airport Pilot Project
- A Gateway to Center City along John F. Kennedy Boulevard



photo by Brenda Miller



Selected Community Greening Projects

Top left: Tree Farm at Senior Center in Germantown. Teenagers from YouthWorks gain work experience while planting trees in a tree farm at Center in the Park, a Senior Center that serves the Germantown neighborhood of Philadelphia. They planted more than 60 trees and 400 perennials. Seniors and local after-school groups will jointly tend the trees, which will later be planted in the neighborhood. **Top right: New Kensington Garden Center.** The Americorps help Philadelphia Green staff to construct a Community Garden Center in North Philadelphia's New Kensington neighborhood. New Kensington is the site of a new program initiated by PHS and the City's Office of Housing and Community Development to establish a neighborhood-based open-space management system to address vacant land in Philadelphia. **Bottom: Norris Square.** Neighbors at Norris Square care for their neighborhood park. This park is located in the heart of the Norris Square Green Countrie Towne, dedicated in 1993. Over the last few years, this Kensington area neighborhood has experienced a major revitalization and is now dotted with beautiful gardens and tree-lined streets, centered around an active, vibrant park.

A Year in the Life of The Flower Show Exhibitor

Competition and Cooperation Drive These Four Exhibitors

 by Mary Dolden-Veale

“We make things excruciatingly difficult for ourselves, explains John Martin, chairman of the Department of Ornamental Horticulture and Environmental Design at Delaware Valley College in Doylestown, Pa. “Every year the exhibit we plan is completely different from anything we’ve done before.”

Martin, who has overseen the design and execution of the College’s exhibits in the Philadelphia Flower Show for 18 years, says this with not just a touch of good humor. This concealed good cheer, masked by “excruciating” descriptions of year-long design and growing processes, Herculean installation efforts and hair-raising last-minute disasters is common among many of the major exhibitors at the Show. The planning, design and installation, and yes, even the tearing down of the exhibits requires a huge commitment of people power, time and money, and the process, which many of the exhibitors say never ends from one Show to the next, is as fascinating as any major construction project. “It gets in your blood,” acknowledges Robert Lamsback of Lamsback Floral Decorators, who with his wife Karen is exhibiting this year for the sixth time. “If we didn’t do the Show, we would feel a terrible loss.”

Each of the exhibitors has a different approach, of course, and there are distinct types or categories of organizations and businesses that are included in the Show, from Landscape Designers to Floral Designers, Nurseries and Educational/Academic Institutions (see page 15 for a complete list of exhibitors). Each of the four has a different story to tell here, and they each seem to genuinely display the same enthusiasm for being involved. See if you agree.

Daniel G. Kepich & Associates
Holicong, PA
The Landscape and Maintenance
Company
Daniel G. Kepich, owner

Dan Kepich’s Bucks County-based land-

scaping business determines many of the key features for which their spectacular exhibits are well-known to Flower Show audiences. Kepich’s themes for his exhibits are almost always adaptive recreations of some existing, well-known feature of the landscape in Bucks County. As he explains it, “We take a piece of the property, and stay pretty faithful to its depiction, allowing people to have something to relate to.”

The 1997 exhibit “Carolyn’s Cottage, An American Cottage” was the faithful recreation of a garden and potting shed of a Bucks County neighbor (and client). The lovingly recreated shed now acts as pool house (and potting shed) at Kepich’s home.

Known for their ambitious display programs, Kepich has learned to take advantage of the methods and equipment he uses in large-scale landscaping projects and applies both in the installation of the exhibit.

While Kepich claims never to have put a plan for the exhibit down on paper, he also describes a process in which the conceptual design may evolve over the course of one or two years, in his head. He describes his thinking process, which later translates into the first stages of installing the exhibit, in terms of “big units”: the major structural and built elements of the display. These might include, according to the overall concept, background trees, buildings or a major focal point — a gate, a driveway, a cottage, as well as the major flower beds and significant trees and shrubs. Known for his ability to bring in huge trees, he admits that his large-scale landscaping business, and his capability in the role of nurseryman to actually grow some of the large evergreens that are used in the displays, has served him well over time. Kepich thinks big.

Over the years, with greater experience in the trials and tribulations of getting ready for the Show, he has decided that it is well worth the cost of transporting plants and major structural components of the

exhibit in 40-ft. tractor trailers. After years of having crews transporting everything in smaller trucks, making multiple trips from Bucks County to downtown Philadelphia and back again, often in terrible weather, he finds the investment in the rental of the big trucks a blessing. “We drive in, we’re there, and we don’t have to go anywhere.” Again, in his “thinking big” manner, Kepich designed a unique tree stand for the huge evergreens that serve as backdrop to the exhibits. The stands are designed to facilitate moving the trees around. He describes it: “We just push them into place, as we like,” while others struggle with hoists and pulleys, as he has done in the past. The evergreens that Kepich and many of the exhibitors use to screen their exhibits from one another, and to serve as the backdrop for each display are usually cut trees, though so freshly cut they are still “alive” and are sprayed for fire resistance. While the notion of cutting these trees for a week’s display may seem onerous to the environmentally sensitive, Kepich says that his approach to it is the same as good forest management and that he recycles the trees after the Show, often into landscape materials. Trees are not the only thing that he recycles.

The 1997 exhibit “Carolyn’s Cottage, An American Cottage” was the faithful recreation of a garden and potting shed of a Bucks County neighbor (and client). The lovingly recreated shed now acts as pool house (and potting shed) at Kepich’s home. He has reused storm sashes on his house, and he plans to place some stone columns from a Show a few years past at the entry to his driveway.

Many of the plants also find their way back to Kepich’s own lawns and gardens. (Though not always permanently. His wife has been known to question that occasional hole in a garden border where a hosta once happily sat, a hosta since relocated to a satisfied landscaping client’s garden scheme.) And as Dan Kepich relates, as well as most of the other exhibitors, it is forcing the plants where the real, long-term, year-long effort takes place.



Cheerful, colorful and delightfully cozy, Daniel G. Kepich & Associates' *Carolyn's Cottage, An American Cottage* portrays a spot close to home in Bucks County, Pennsylvania. They won **The Best Achievement in the Landscape Category** for best design for cutting and drying plants, and **The Mayor's Trophy** for appropriate use of a wide selection of plants.

Forcing is by far the biggest endeavor, he says, even with 14 years of experience. It has gotten less scary with information shared among exhibitors, and his investment in a 30-ft.×96-ft. climate-controlled greenhouse. He insures a plentiful supply of key pieces by forcing between two and three times the number of plants used in the exhibit.

If Kepich's approach appears casual — he claims not to record forcing information from year to year, while other exhibitors maintain careful journals — it is not. Rather, he has come also to rely on the camaraderie of the exhibitors, and what he refers to as a "mini-enterprise" that has grown around the highly specialized field of forcing plants to bloom within the space of a single week in March. Certain exhibitors and nurseries have attained success with specific plants, and they either have shared the information over the years, or rely on one another to actually grow certain things for one another. Kepich, for example, has had great success with both large-scale ostrich ferns and a full spectrum of butterfly bush (*Buddleia*). When planned and ordered ahead, there is a cost between the exhibitor-growers involved of course, and thus the "mini-enterprise." But, in the somewhat

surprising collegial attitude of the Show's exhibitors, as Dan Kepich describes it, "Before the Show, everyone's willing to share, to a point. But once you get there and are actually setting up, everyone helps one another in any way they can. During the week before the Show opens, the question becomes, 'What do you need?' " One would assume that Dan Kepich and his team of employees, family members and friends have much to offer in expertise and, perhaps, the occasional ostrich fern.

Delaware Valley College

Department of Ornamental Horticulture
and Environmental Design
Doylestown, PA
John Martin, Chairman

John Martin, now chairman of the department at Delaware Valley College, first was involved in the College's Flower Show exhibits as a student in the 1960s. He places the experience and educational factors of actually setting up the displays and working amongst the top horticultural professionals, as one of the most beneficial reasons for the school's student involvement in the Show. Unique in horticultural education in this country, Delaware Valley

offers a for-credit course, "Flower Show Practicum" to students in the ornamental horticulture program. And as Martin says, "it is the most difficult course they take."

Because of the Flower Show setting, and the educational nature of the College's display, the school's approach is highly structured, in contrast to the commercial growers and landscape companies. Starting in the spring directly after the Show, plans are started for next year's exhibit. It isn't, however, until the fall, when the students are back, that the planning becomes formalized. Students are involved in two ways: as students in the Practicum, for credit, and also as volunteers. Many of the volunteers are actually from other areas of curriculum that the school offers, but they are interested in the hands-on aspects of the Flower Show exhibit.

Meeting at least once a week, the 30 or so students are guided by Martin. First, they brainstorm ideas for the exhibit. Often, the Flower Show's main theme is explored. This year, the "French Connection" led the discussion towards notions of particularly French associations. With the charge for the Delaware Valley College exhibit to be educational, students thought through the perfume, fashion and cosmetics fields that



photo by Walter Chandraha

The Delaware Valley College of Doylestown, Pa., and Techno Vocational College of Horticulture [Japan] brought Japanese and American students together to create *A Karesansui garden - Condensed and Symbolized Nature*. Their grand efforts to communicate paid off with **The PHS Award of Merit** for an outstanding exhibit in the Academic Educational Category.

are quintessentially French. The notion of having a little bit of "Paris in your own backyard" developed into the full-blown theme. Several sessions later, concentrating on what Martin calls "a hook" to interest the Show audience, a title "From Flowers to Fragrance to Passion and More..." was settled on. The hook? *Passion*. The approach? *Surreal*.

Then it's down to business — not surreal in the least. Several committees are set up. The largest is the Plant Material Committee, in which students research, "hone and hunt" for relevant and appropriate plants. They also order, grow, label, wrap, and force the necessary plants, as the time comes during the course of the fall and winter. (Martin describes the process of successful forcing for the Show's timetable as "throwing a dart at the wall.") The Construction Committee designs the structure, in this case the house, and the living wall frames, and figures out how to build them. The Logistics Committee creates a good system of management for all that comes during the conceptual and growing stages as well as the most important task of getting everything to the Convention Center, including materials and students. The Education and Publications Committee writes and produces the exhibits sign-

age, educational materials and brochures. The committees meet on their own and then together. It is John Martin's job to make sure they stay on track.

A good part of the logistical requirements of the non-profit exhibit is locating goods and services that will be donated, from alumnae, local businesses and friends of the college. "The labor is free," Martin notes with a grin. The students involved are required to commit to being around for the Show, and for tearing it down at its conclusion, even though it happens to fall within the college's Spring Break!

The students are not alone, however. John Martin says that he learned after several two o'clock in the morning finishes that it can't be all students and volunteers, and so faculty and professional staff are enlisted as a part of their teaching obligation. While the school does not have access to the big equipment that the commercial landscape companies use, they do have plenty of manpower, borrowed equipment and transportation that help enormously.

Transportation of both materials and students is always a test. While the college is taking advantage of discount train fares now, Martin has some interesting anecdotes from years past: vans being towed by the City and leaving students stranded in

The complexity of forcing involves more than simple temperature and light controls, but cooling down, warming up, pruning, maintaining one temperature at the root base and another ambient temperature around the buds, compacting roots (pot-bound) and, in general, subjecting the plants to a sort of controlled stress.

Philadelphia's Civic Center, far from their dorm rooms in Doylestown, or the absent-minded professor (or student) who went back to Doylestown with the keys to the van still at the Flower Show in his pocket.

It must be worth the effort despite the trials. Delaware Valley College has exhibited at the Philadelphia Flower Show continuously since 1950, according to John Martin. The students gain a great deal, Martin says, and in a number of ways. They learn by doing the research required to develop the concept, itself. For example, this year they had to study the business and science of creating fragrances. They also learn from the tactile and concrete requirements of growing and forcing the plants and building the exhibit structure. They gain valuable experience by being involved in one of the most prestigious public shows of its kind, as they work in the exhibit during the week of the Show, and interact with the Show's organizers and the public audience. And, Martin points out that the networking experience, watching, meeting and even working alongside professionals in horticulture (some of them graduates of the Delaware Valley program) is an unusual opportunity.

In years past special relationships have formed between neighbors on the showroom floor (The American Institute of Floral Designers came to the rescue with a hot glue gun recently) and especially in joint programs with schools abroad, as in the past with Japanese and English students of horticulture. Martin smiles, "It's gotten easier. The move to the Convention Center, which we were worried about, has made getting things into the exhibit easier. And he says, with that slightly comical cheeriness of the 18-year veterans, "We've gotten better; I've gotten smarter."



The 1997 Flower Show theme, *The Great Exchange: People, Places and Plants*, inspired major exhibitor J. Cugliotta Landscape/Nursery Inc.'s whose *Oriental Exploration* stopped visitors in their tracks. Here an 18th century explorer set up camp in the Far East surrounded by rhododendrons, azaleas and dogwoods and a dazzling wildflower meadow. Cugliotta won **The Best Achievement Award in the Landscape Category** for most imaginative meadow and **The Philadelphia Flower Show, Inc. Silver Trophy** for the most distinctive garden in the Show.

J. Cugliotta Landscape/Nursery, Inc.
Southampton, NJ
Joseph Cugliotta, owner

Joe Cugliotta, after 14 years exhibiting at the Philadelphia Flower Show, has some war stories to tell. His first year in the Show, it started snowing on the Thursday they were to bring in all the plants, two days before the Show opened for judging on Saturday. On Friday, they had to dig the trucks out just to get to downtown Philadelphia. While it was still snowing, they had to go back again, this time having to dig out the driveway at the nursery to get in. Then back to the Civic Center, to install the plants. It was 5:00 in the morning the Saturday of the judging, before he got home.

Winter storms notwithstanding, enthusiasm runs high for the people who work with Joe Cugliotta. With the help of many staff members, a landscape plan is begun on paper, following through on a concept developed during a discussion among a key group, and especially, in recent years with landscape designer and employee, Laurel Allen. In early fall, they talk the concept through, and the discussion is imbued with an exacting knowledge of the company's specialty: creating outdoor living spaces.

Cugliotta says emphatically that they focus on the human element within landscape. This makes a difference in their design, and as designer Allen explains, the structure and scale of the exhibits they create work best when the principles they use in landscape design are applied within these miniature landscapes. "People want to see things that they can do themselves, within their own gardens, and we try to show them interesting techniques." Allen describes, for example, how they place larger landscape elements towards the front of the design, then lead the viewer's eye back towards an arrangement of smaller elements, a principle that could easily be used in a small yard to make the space seem bigger.

The Cugliotta group understands the audiences' desire and response to color — an aspect that they emphasize, and explore each year. Again, a basic principle is applied to the palette and design of their exhibits, using warm colors in front, dark colors that recede to define spatial relationships and structure. The concept and design are carefully laid out to scale on graph paper and plant lists developed, materials located and orders placed.

While Laurel Allen describes the flowers themselves as "the frosting on the cake,"

referring to the importance of the right structure beneath the exhibit, it is the frosting that takes priority during the fall and early winter as the palette of flowering plants is installed into greenhouses for forcing. As with other nurserymen, Joe Cugliotta places great weight on the tricky business of forcing the plants to be at their height of bloom for the Show. He has added a specially designed greenhouse at his nursery in Southampton, New Jersey. The complexity of forcing involves more than simple temperature and light controls, but cooling down, warming up, pruning, maintaining one temperature at the root base and another ambient temperature around the buds, compacting roots (pot-bound) and, in general, subjecting the plants to a sort of controlled stress. According to Cugliotta, this literally "forces" them to bloom in response to what is perceived as stress — an unnatural manipulation of their normal growing mechanisms. He also believes that it is in fact partly due to this stress — the plants reacting by exaggerating bloom or strength — that actually enhances the bloom. And despite the technologically advanced greenhouse, they need to be watched constantly for signs of progress, which could be too slow or too fast towards the all-important date in



Lamsback Floral Decorators' 1997 exhibit, *Over the River and Through the Woods*, celebrated the frolicking topiary teddy bears picnicking in a forest. Lamsback won **The Best Achievement Award** in the Floral Design category for their fanciful party decorations and the **PHS Council Trophy** for most accomplished display of forced plants and/or cut flowers.

March.

Often incorporating an architectural element or water feature within their display, these components are usually built or assembled before going to the Convention Center — if it is a water feature, it is tested at the nursery before it makes the trip. And Laurel Allen describes their approach to a background, usually large evergreens, as the same sort of screening that they might use to hide the view to the next-door neighbor.

As seasoned veterans, the Cugliotta crew also points to the necessary flexibility of the "best laid plans." Once they actually start setting up the exhibit things are bound to change. Many decisions are made on-site; plants pulled, exchanged, moved forward or backward. Plants are traded with other exhibitors, and the hectic set-up schedule takes its toll. By the opening of the Show to the public, the crew is exhausted, and need a second wind to respond to viewer's questions about the exhibit and to be vigilant in maintaining the freshness of the exhibit, either early in the morning or late at night, throughout the week. Even after the show has closed, people continue calling the nursery. And staff continue their discussions — about next year's exhibit. And now, a little time, perhaps, to enjoy a well-deserved rest. Even some of the forced plants also gain a rest. After their stressful display, they are usually pampered for an entire season before being returned to nursery stock, if ever.

Lamsback Floral Decorators

Philadelphia, PA

Robert and Karen Lamsback, co-owners

Robert and Karen Lamsback create theatrical settings as a matter of course. Their business is floral decoration of events, especially weddings, bar mitzvahs and celebrations of every kind. As Bob Lamsback says, "We're involved with people at the happiest times of their lives." Creating a beautiful setting, using cut flowers as the basis is what they do year-round. But the Flower Show is still, of course, a very special opportunity for the Lamsbacks and the people in their firm to create an extraordinary setting and to tell a special story.

As Bob Lamsback relates enthusiastically, they bounce ideas off of one another over the breakfast table. And this husband and wife team seem to balance one another nicely by offering ideas, often as Bob says, exaggerating a story line, and then with a little give and take, coming up with an idea they feel comfortable with. Sometimes. Even when they have moved through the conceptual ideas, he says there are times along the way between the fall and the installation in March when they wonder whether they've done the right thing.

The Lamsbacks work with a professional set designer, who creates with them a full-color rendering of the exhibit. Because of their professional focus, they often furnish the space much as they would specify all the accoutrements for a lavish party —

everything from table settings and draperies to music and theatrical lighting.

Their essential goal is to gear their exhibit to their ideal client, and at the same time to entertain. "Our exhibit should be, foremost, a mass of flowers," Bob says, "To the point of craziness." The Lamsbacks concentrate on creating a story and telling it with cut flowers, artfully arranged. Their concern, above all, is to engage the audience with the freshness of the flowers, and to that end, their efforts are as monumental as some of the exhibits mounted by nurseries and landscape companies.

As they tell it, the implementation begins with a visit to the exhibit space on the Sunday night previous to the Show opening, with the Lamsback's two children, 11 and 13 years old, in tow. These children have grown up with the Flower Show and help assuage their father's nervousness, "The anguish over our own decisions," says Karen. The space, marked out on the floor with taped lines, always starts out looking smaller than they imagined. But as the first days of setting up go by, mulch, trees, tables and rental furnishings, and always some special accessories, things work out — with attendant changes. The camaraderie is a big factor to the Lamsbacks. "It's like a big party," he says. "Each year when we come back in, it's as though we never left."

Their process is quite different from landscape exhibitors' because the medium is cut flowers, and not until the Friday before opening do they bring in thousands of fresh flowers, and then set to work in the Pennsylvania Convention Center, creating the complex arrangements. Freshness is key: every day during the Show fresh flowers will replace tired blooms, and the whole exhibit is, literally, refreshed halfway through the week. By late Saturday afternoon, the Lamsback family is in formal clothes, ready for the opening party. Bob Lamsback is nervous with excitement and anticipation. "It gets in your blood," he says of the competitive atmosphere. "It's a lot of work." Though they are often busy with other work at the same time, they wouldn't think of not exhibiting. "This is what we *do*," Karen says.

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Mary Dolden-Veale is a freelance writer and editor who recently moved to the Philadelphia area. She has written about design and architecture for *The Boston Globe*, *Progressive Architecture* and other publications.

Forcing the Major Minors

photo by Arlene Wolk



by Art Wolk



Will spring never come?

Winter's snow, ice, and arctic winds make you think that the coming growing season will be limited to caring for plants on the indoor windowsill. But in spite of all the dreariness, a few death-defying green spikes manage to poke through the frozen earth. And, if the temperature manages to hit 50°F for a few days running, flower buds burst forth to bring color to an otherwise lifeless landscape. These are the first bulbs of late winter — called minor bulbs — which never cease to give us hope that spring will indeed arrive.

continued

29

EXHIBIT 315
IRIS 'GORDON'

ART WOLK

ENTRY 7

FIRST PRIZE

THE
PENNSYLVANIA
HORTICULTURAL

Art Wolk's 8-in. pot of *Iris* 'Gordon' won a blue ribbon at the 1996 Philadelphia Flower Show.

Forcing the Major Minors

The world at large may be content to wait for these first outdoor dabs of color, but we gardeners are an impatient lot who don't mind pushing plants to their limits. And these bulbs are the perfect plants to force into bloom indoors, well before their outdoor brethren have shown even a hint of life. All it takes is a little *fall* planning to reap the mid-winter reward of bright, cheerful pots of color.

Of all the bulbs, the minors are the easiest to force into bloom. I'll focus on the best-known and the ones that I have the most experience forcing for the Philadelphia Flower Show. I call them the "major" minors and they comprise *Crocus* (*chrysanthus* or *vernus*), *Scilla mischtschenkoana*, bulbous *Iris* (*reticulata*, *histrioides*, or *danfordiae*), and *Muscari* (*armeniicum* or *azureum*). Here are three simple stages for forcing minor bulbs into bloom, as well as a few hints about what it takes to produce a blue-ribbon pot.

Step One: Potting-Up Bulbs

I buy virtually all of my bulbs from reputable mail-order sources, since they provide larger and healthier bulbs than are available at most garden centers. When they arrive, I inspect them for disease. The two most common disease symptoms are either softness in the round, outer portions of the bulb or rot on the bottom (basal end) of the bulb. Never plant these bulbs, since they can spread disease. Some exhibitors dip their healthy bulbs in a fungicide before planting them, but I never have. I've found that if I'm careful to exclude any "Typhoid Mary" bulbs at the beginning, I won't have problems later.

Whenever I grow any plant, I try to reproduce the same conditions that it encounters in nature, where it successfully competes against other plants for soil and light. In their native areas, these bulbs are found in stoney, granular soil where the oxygen content is high.

To simulate these conditions I do two things: First, I always use clay containers. This assures that the clay wicks away excess water, and keeps the air content in the soil high and reduces the chance of fungal disease. Second, I use a porous soil mix, namely Pro-Mix BX. It's made up to 60% sphagnum peat moss, 20% perlite, and 20% vermiculite. It also contains a variety of nutrients and is balanced for pH. This combination allows moderate water retention as well as high air content — the



The author's 8-in. pot of double-layered *Muscari armeniacum* won a blue ribbon at the 1995 Philadelphia Flower Show.

perfect combination for spring-blooming bulbs. You can usually obtain the soil mix from your garden center or an Agway store.

Start by soaking the clay pot in water overnight. When the pot is soaked, cover the drainage hole with a piece of broken pot to prevent roots from coming out of the bottom. Next, fill the pot about 2/3 with your preferred potting mix, premoistened (not saturated), level the soil, and begin layering the bulbs in the pot. Don't be afraid to put bulbs against one another in the pots. Remember, the more bulbs, the better the display.

Cover the bulbs with soil, then firm the soil with your hand. This is done to keep the bulbs in the pot, since even the small minor bulbs send down roots so vigorously that they can force the bulbs out of the pot. I actually create a firm dome of soil over the pot to keep the bulbs inside. Press down with about the same force you might use on pizza dough when spreading it on a cooking tray.

Finally, use a permanent marking pen and write the name of the bulbs and date on a plastic marker to be inserted in the pot.

Step 2: Cold Treatment

Although you'll sometimes see the leaves

of spring-blooming bulbs emerge in the fall, you never actually see blossoms.

There are two reasons for this: First, bulbs need cool soil conditions to send out a good network of roots. Second, research shows that spring-blooming bulbs must go through an extended cool period to begin flower stem extension. When you see potted tulip or daffodil bulbs at your local supermarket that bloom too close to the soil, it's invariably because of too short a cool period. The ideal temperature for this cool period varies from bulb to bulb, but for the minors discussed in this article it's about 48°F.

I've found that crocus, iris, and scilla will bloom with as little as eight weeks cold period at these temperatures. *Muscari* need at least 10 weeks. Of course, the longer the bulbs are exposed to these temperatures, the more root growth they'll have and the better the display will be. Root growth is the most important variable you'll deal with in forcing bulbs. It's essential if you want a uniform pot of blooms. As long as you pot up your minor bulbs in October or November, you'll be giving them enough of a cool period to produce an exuberant winter display.

If you're a newcomer to this endeavor, the best place to give your pots this cold treatment is as simple as a hole in the



Ari Wolk's 8-in. pot of double-layered *Crocus vernus* 'Yellow Mammoth' won a blue ribbon at the 1996 Philadelphia Flower Show.

Mid-winter Indoor Flower Show



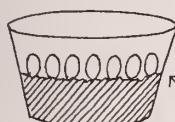
broken clay pot pieces cover drainage hole

- 1** Soak a clay pot overnight in water. Cover the hole in the bottom of the container with pieces of broken pot.



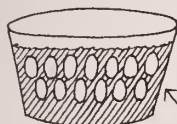
potting mix

- 2** Fill pot about 1/2 with porous potting mix.



single layer of bulbs

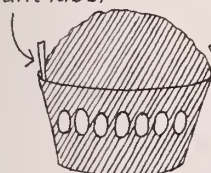
- 3** Plant a single layer of bulb. Yes, they *can* touch each other.



double layer of bulbs

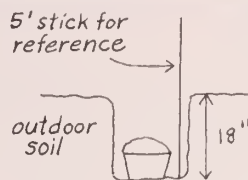
- 4** For those seeking the "perfect" pot of bulbs, plant a second layer of bulbs over the first layer. Be careful to not put the top-layer bulbs directly over the shoots of the bottom-layer bulbs.

plant label

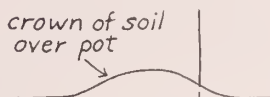


dome of potting soil to keep bulbs inside pot

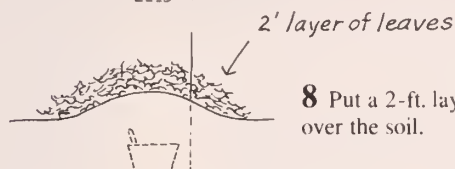
- 5** Label your potted bulbs using a plastic label and a permanent marker. Put a firm dome of soil over the bulbs.



- 6** Place pot in the bottom of an 18-in. hole, then place a 5-ft. stick in the hole for future reference.



- 7** Put a crown of soil over the hole so that water drains away from the area.



- 8** Put a 2-ft. layer of leaves over the soil.



pot removed from ground in mid-winter

- 9** After at least 10 weeks, carefully remove potted bulbs from the ground.



pot hosed-down and ready to force in cool (55-68°F) location

- 10** Hose down the pot. Be sure to leave enough of a lip inside the pot so it can be watered. Put the pot in a sunny, cool (55-68°F) location in the house.



minor bulbs in bloom (Scilla, Iris, Crocus 3-7 days; Muscari 21 days)

- 11** Watch the show! In three to seven days for iris, crocus, and scilla, and about 21 days for muscari, you'll have a mid-winter, indoor flower show.

ground. It may sound unsophisticated, but it works. I won my first blue ribbons with bulbs using this technique.

Pick a site where the water doesn't collect and then dig down about 15-18 in. Place your pots next to one another in the bottom, then, for future reference, make a map of where each cultivar is located. Place a tall stick in the bottom of the hole, then fill with soil. To be certain that the water drains away from the spot, create a crown of soil over it. The stick should protrude about three feet above the soil level. Next, pile about two feet of leaves over the soil to keep the soil from freezing hard in the winter.

Now it's time to let winter do its worst.

While you head indoors, your bulbs will quickly burst into rapid growth.

Step 3: Forced to be Beautiful

If you've allowed about 10 weeks of growth, you can begin your indoor flower show. Even if there's a foot of snow on the ground, the stick you put next to your pots will be evident. After you remove the leaf mulch, carefully dig from the side toward your pots. When you get close, just use your fingers.

Remove as many pots as you like from the hole. If you want to extend the indoor display, just bring in one or two each week. After you get the pots out, clean off the

excess soil. I actually connect my hose in mid-winter and use a rapid spray to wash the pots. You want to be sure to remove enough soil from the top so that you have sufficient space to water your pots indoors.

Now, for the real fun! Given sufficient light, warmth, and moisture, your potted bulbs will burst into bloom in no time.

Pick a sunny window where the temperature is 55-68°F. It's especially important that you pick a location where the temperature doesn't reach 70°F, even when it's sunny. If it's too warm, the flowers may not appear at all; or if they do manage to emerge, they last about as long as butter in a hot pan.

On the other hand, if you can keep your



Arl Wolk's 6-in. pot of *Scilla mischtschenkoana* [tubergeniana] won a blue ribbon at the 1997 Philadelphia Flower Show.

pots closer to 55°, you'll achieve more uniform bloom and longer-lasting flowers. You might consider closing off a heat register in the room to keep it cool. (This may involve evicting someone, but families with a bad case of cabin fever have to keep their priorities properly in place.)

Crocus, scilla, and iris all benefit from cooler forcing conditions. In my greenhouse, I force all three under the bench, where the temperature is about 55°. Even so, these flowers burst into bloom in just 3-7 days. (During mild winters, these pots are so close to bloom after outdoor treatment, that I sometimes think they start coming into bloom during the trip indoors!)

Admittedly, even with cool growing conditions, these flowers don't last more than about five days. So it's probably a good idea to plant a few bulbs in a lot of pots that can be brought indoors a few at a time. To prolong the life of the blooms, keep the flowers at temperatures as low as 33° when you're not admiring them. One possible nighttime location is the refrigerator. If you have to displace a bit of food, that's okay. After all, what's more important than food for the soul.

Muscari (grape hyacinth) start blooming outdoors a bit later than the other minors, so it follows that they benefit from warmer forcing temperatures. I force muscari on the greenhouse bench where the temperature is 60-64°, and it takes 21 days for these bulbs to bloom. Since the wonderfully scented flowers occur in clusters and bloom from the bottom up, the flowers in each pot last longer than the other minors.

When you're finished forcing the minor bulbs, save them for outdoor bloom. (Forcing weakens the bulbs, so they shouldn't be forced two years in a row.) Snip off the dead blooms, put the pots back in the sun, and continue watering. When the foliage turns yellow, carefully remove the bulbs from the pot and plant them in the desired location in the garden.

In Pursuit of Excellence . . . and Blue Ribbons

Whether your holy grail is a blue ribbon or simply that perfect, evanescent pot of blooming bulbs, you should know that the three most important things in your quest are flowers, flowers, and flowers. Nothing wows judges quite as much as a pot bursting with flowers.

Having said that, it's easy to figure out how to produce your perfect pot of bulbs. Since flowers come from bulbs, all you have to do is get more bulbs into the pot. But how can you find more space? You've already got the bulbs planted in a single layer, cheek-to-jowl. What's a grower to do?

The simple answer is to put in another layer of bulbs on top of the previous layer.

It works like this: (1) Do everything as described above, but plant the first layer of bulbs a bit deeper, about half-way down the pot; (2) Cover the first layer with soil so that you can still see the tips of the underlying bulbs; (3) Carefully put in the second layer of bulbs, being sure to never block the tops of the underlying bulbs. Leave room for the lower level shoots to emerge. The upper layer of bulbs should still be below the top of the pot. From here on, follow the same steps described above for single-layer pots.

Another parameter that's important to judges is the display as a whole. That is, how does everything fit together: the pot, the shoots, the foliage and the blooms. Nothing leaves exhibitors more broken-hearted than having a pot bursting with blossoms that doesn't win a blue. Usually the answer is that the shoots are too long. Admittedly, it does look a bit silly when the pot is 4 in. tall and the shoots stand 9 in. taller.

These long shoots are usually caused by potting up bulbs too soon in the fall or by placing the pot too deeply in the ground.

For scilla, iris, and crocus I've waited until late November or even early December to pot up. I put these pots in cold frames and place them *near the surface*. Similarly, if you're putting your pots in a hole, put them near the surface.

In spite of all your efforts, we may have such a mild winter, that your pots start showing bloom too early. The winter of 1994-95 was so mild that all my pots of crocus in a cold frame were coming into bloom outdoors in late January, five weeks before the Philadelphia Flower Show. I resorted to an ice crusher to produce artificial snow, which I spread daily on the potted bulbs to hold them back. This admittedly compulsive precaution produced the desired effect, and I won all three blue ribbons that year.

If you'd like to join the Flower Show fray and the quest for blue ribbons, see box on page 21. One warning though, exhibiting is quite addictive. I can't count all the exhibitors who have told me they're going to cut back on their exhibiting, but end up increasing their number of entries the following year.

Bulb Sources

Daffodil Mart
7463 Heath Trail
Gloucester, VA 23061
1-800-ALL-BULB

McClure and Zimmerman
108 W. Winnebago
P.O. Box 368
Friesland, WI 53935-0368
(414) 326-4220

John Scheepers, Inc.
23 Tulip Drive
Bantam, CT 06750
(860) 567-0838

Van Engelen, Inc.
23 Tulip Drive
Bantam, CT 06750
(860) 567-8734

Art Wolk writes and lectures on a variety of garden topics. At last year's Philadelphia Flower Show he had eight entries in the minor bulb classes and received seven blue ribbons. He credits his success to his local convenience store manager, who let him use a walk-in refrigerator to hold back his bulbs amid the eggs, milk, and soft drinks.

Shipley Sprouts

A Growing Tradition



by Marban M. Sparkman

One memorable Friday, several years ago, they produced 50 individual entries in the Horticulture Class and took home 49 ribbons. Daffodils and dish gardens are their specialty but they also try their hand at Window Sill Collections and Room Classes. They are knowledgeable, eager and formidable competitors. They are the Shipley Sprouts, a group of high school students who garden in a small greenhouse on the Bryn Mawr campus of the Shipley School under the experienced hand of Leila Peck, school horticulturist.

College-bound seniors, varsity athletes, yearbook editors, eager freshmen, a group of about 25 students most years, converge on the greenhouse for their activities period, one 40-minute session per week. If the Flower Show results seem to belie the classroom time spent, it is because the greenhouse is always open and beckoning during free periods and much extra time is spent on weekends around Flower Show time. Aside from the sheer pleasure of mucking about in peat and perlite, the secret ingredients for success here are their passion for the project and their strong competitive spirit.

Home for the Sprouts is a new 12×28-ft. greenhouse attached to the side of the science building. Built in 1995, the greenhouse replaced the original structure where the program began in 1974. That first spring, Ruth Symington, head of the Science Department, asked Mary Allen and Leila Peck, both garden clubbers and active parents of lower school children, to gather

photo by Marban M. Sparkman

Troughs in the making. Wearing plastic aprons and rubber gloves, Shipley Sprouts take advantage of a warm October morning to slather the cement mixture over their chosen molds.

Shipley Sprouts

some parent volunteers to help start a program. Mary had some experience in her own greenhouse and Leila was already a seasoned competitor in the Philadelphia Flower Show. The seeds of passion for the plants and a spirit of competition sprouted from the beginning. The most notable event that first year was the packet of zucchini seeds that was spread around the greenhouse by one of the aspiring young gardeners. Zucchini sprang up everywhere. It sprouted from pebbles and benches and pots. It was a horticultural success destined not to be repeated. They never planted zucchini again. "We learned," says Peck.

Starting with what they knew best, the gardening team of Allen and Peck introduced the Sprouts to the art of forcing bulbs. From experience, they knew that the early yellow daffodils such as 'February Gold', 'Ice Follies' and 'Peeping Tom' were the easiest to force so they began with them. Twenty years later these dependable bulbs remain Sprouts' favorites.

Potting up time comes just as the fall sports schedule is winding down, which helps to insure that all hands turn out for that important phase. First the students scrub and label their pots. Next they half fill the pots with a layer of pebbles, a layer of potting soil and a dash of superphosphate. Then they pack their chosen bulbs as tightly as possible into the pot, cover the top with more soil and tamp. After a 24-hour soak and drain, they place the pots in a pit just outside the greenhouse and cover with shredded leaves and pine needles. Cool and damp, the bulbs form roots over the next eight to 12 weeks while the student gardeners go back to their academic pursuits.

The Philadelphia Flower Show also offers "bulb garden" classes that are popular with the Sprouts. Creating a bulb garden brings out both the horticultural and artistic skills of the gardener, who transplants fully flowered bulbs into a single new pot, arranging for artistic merit. These assembled gardens can only be put together two or three days before the Show and thus have a special appeal to those Sprouts who have spent more time on the soccer field than in the greenhouse during the fall.

Casting about for another project for the Sprouts, Peck came upon a trough-making exhibit staged by the Delaware Valley Chapter of the North American Rock Garden Society for the Flower Show. Trough-making calls for lots of hands-on activity, mixing and shaping globs of peat



Trough gardens are displayed in the Shipley greenhouse as they await selection for the Philadelphia Flower Show. With so many Sprouts eager to compete, each student is limited to one entry in the class of his/her choice.

moss, perlite and Portland cement into various creative shapes; it seemed like just the thing.

At first the mold of choice was a half watermelon inverted to create a trough that generally ended up in a catchall Flower Show class for terrace containers. There followed experimentation with shapes and sizes. A mold is created by simply inverting a large plastic flower pot and covering it with plastic and chicken wire or by tamping mounds of wet sand into whatever free-form shape is desired. The only rule is that the student must be able to lift the finished product, which is coated with 10 to 15 pounds of the cement mixture.

For exhibition purposes the troughs must also conform to the specifications of a particular class, so there is much poring over Flower Show schedules at this point. Then comes everyone's favorite part of the process—coating the molds with layers and layers of the sticky wet cement mixture to a thickness of at least 1½ inches, lest the trough weaken and crack. Once the hefty, rustic containers have dried for several days they are ready for planting.

The Shipley greenhouse is kept at a cool 55°F suitable for daffodils, so for their trough gardens, the Sprouts turned to succulents, which thrive and multiply quickly at that temperature. The timing for this project works out well with the school schedule. The students make their troughs

outdoors in October, plant them from November into December and spend the month of January at the arduous task of plant identification. Nomenclature can fluster the most experienced exhibitor and the Sprouts have noticed that there are a great many different succulents and that their names seem to keep changing.

Plants for the troughs come primarily from the cactus and succulent house at Stan Cassel Greenhouses, Inc., Chalfont, Pa. Gerald Barad of the Cactus and Succulent Plant Society generously provides cuttings for the Sprouts to grow in their greenhouse as well. Carefully selected for shape, color, texture and size, the seedlings arrive at Shipley nameless. Each gardener must identify the plants used in his or her own garden. Growing conditions in their greenhouse are not favorable for Alpines, so the Sprouts stick with the non-hardy succulents.

Trough gardening was an immediate success at Shipley. Classes in the Flower Show featuring miniature rock gardens, miniature landscape designs and collections of succulents and alpine plants all make use of the hefty homemade containers. They are becoming ever more popular with the gardening public.

Participation in the Philadelphia Flower Show was an integral part of the Shipley Sprouts program from its inception. Says Peck, "I was hooked on exhibiting. It was

Last year, at the 1997 Show, 26 Shipley Sprouts placed 68 entries and won 35 ribbons.

something I knew that we could do." Competition is an important ingredient in the program. It appeals to the kids. They enjoy having a goal to work toward. Peck is quick to remind the eager competitors that winning isn't all, however. Each entry represents hours of planning, planting, grooming, coaxing, and general responsibility for the nitty-gritty of bringing an exhibit through the rigorous "passing" process of the Flower Show.

In 1975, the first year that the program was fully operative, the Sprouts made their debut in the Philadelphia Flower Show. They were a first of their kind and Show officials made it clear that they would brook no nonsense. There would be no special classes for students; their entries would have to stand on their own merits and be judged against all comers. Not surprisingly, they won no ribbons that first year, but they did have 10 well-grown pots of daffodils ready for entry and passed for exhibition. Their appetites were whetted. By the mid-eighties they hit their stride. Last year, at the 1997 Show, 26 Sprouts placed 68 entries and won 35 ribbons. And that does not count the coveted "Best of Day" in the Horticultural Classes (for entry of two or more varieties). That distinction was achieved by Katie Sachs, a 9th grader and first-time exhibitor, for her miniature garden landscape. Katie is the youngest exhibitor ever to win this award.

After Katie Sachs's triumph in the Tuesday judging last year, her fellow Sprouts were "pumped" to triumph again on Friday, with their entries in the next miniature garden landscape class. The judges awarded the three top ribbons to entries that incorporated special architectural elements to complement the plants. The judges were impressed with the class overall and awarded 13 Honorable Mentions to the remainder of the class — all Sprouts as it turned out. The Sprouts were devastated. Katie had won previously in the same class, and she had not included architectural elements. They had read the class instructions carefully — no such instruction was explicit. What could the judges be thinking about? When several of the judges talked informally with the Sprouts after the judging and explained how their interpretations

continued



Angus Campbell, Shipley's Class of '97, comfortably attends to some last-minute grooming chores on his bulb garden entry.

Shipley Sprouts' Recipe for Trough Containers

Make a Mold:

- Choose a salad bowl, a fiberboard or plastic flower pot or any other container with sloping sides and no lip. Consider the possibility of a watermelon half, or shape a mound of wet sand into whatever shape appeals to you.
- The mold should be 4-in. to 6-in. deep for a good planter. Smaller ones will dry out too quickly when planted.
- Start with the mold upside down so that throughout the rest of the process the top of the mold is what will finally be the bottom of the finished trough.
- Cover the outside of the mold with a sheet of plastic.

Stir Up the Cement Mixture:

- Combine equal parts of peat moss, perlite and Portland cement, in a cement pan.
- Add water and mix with trowel and hands to the consistency of cottage cheese.

Cover the Outside of the Mold:

- Daub on several layers of the cement mixture to a uniform thickness of 1 1/2 in.
- Test for thickness by inserting a knife tip into the sides and where the sides meet the top of mold. The top and bottom edges of the trough must be a uniform 1 1/2-in. thickness to insure strength.
- After the first inch of cement add a layer of chicken wire to reinforce the bottom and sides of the finished trough, then continue to pat on layers of cement to desired thickness.
- Rub with water to smooth the surface.
- Flatten and even the bottom by scraping with a board so that the trough will sit squarely.
- Poke three dime-size holes into the bottom for drainage.

Allow the cement-covered form to dry for 36 to 48 hours, depending upon temperature — better too hard than too soft.

Turn Hardened Container Right Side Up:

- Remove original mold and plastic liner — use water and a knife to scrape where necessary.
- Brush gently with a wire brush on the flat, top edge to roughen and add texture.

Containers should cure for six months before planting but Sprouts plant successfully within a month.

Shipley Sprouts



A celebration in the greenhouse. Head of School, Steve Piltch congratulates the Sprouts in their greenhouse after another successful year at the Philadelphia Flower Show.

of the class differed from the panel of judges who had preceded them on Tuesday, it was a lesson in points of view. And the Sprouts, well schooled in the etiquette of the playing field, understand that the decision of the umpire is always correct. Look for added architectural elements in at least some of their miniature garden landscape entries at the 1998 Flower Show.

With two previous successful entries under their belts, the Sprouts plan to enter the container display class again this year. Staged as a 6-ft. x 10-ft. section of a room it's a major undertaking that will keep all hands busy designing and constructing the background and readying plants for the installation. Several parents have volunteered to help, and friends at a nearby retirement community are tending one plant that calls for warmer conditions than the Shipley greenhouse provides. Appropriate to the spirit that the Sprouts bring to all their gardening projects, the container display class they have chosen to enter is called "My Passion Is . . ."

Arriving on the Flower Show floor at 6:30am, a large group of boisterous teenagers lugging 30-pound trough gardens and balancing armloads of fragile bulb pans is a fearsome sight. High spirits abound — it is a day out of school, after all. The managers of the Competitive Classes eagerly anticipate the arrival of the Sprouts. The quantity and quality of their entries helps to ensure an abundance of bloom in the Horticult beds. Sprouts take it all in stride and enjoy talking with other competitors, exchanging growing and grooming tips with their adult peers.

Several Sprouts have taken the skills honed in the Shipley greenhouse on to the broader world. Tina Rovito, who graduated in the early eighties went on to the Horticulture Program at the University of Delaware and then to the Cornell School of Agriculture. She now lives in western Massachusetts where she and her husband manage a commercial greenhouse. Her recent Christmas card showed the young couple in their greenhouse in a bower of poinsettias ready for market. Still smitten with the competitive bug, she included pictures of her prize-winning harvest basket entry from a local flower show.

Steve Simich, another recent graduate, majored in environmental studies at the University of Michigan. He went to work in a greenhouse in Denver, where he was responsible for forcing 5,000 tulips for the commercial market. His former mentors in the Shipley greenhouse were pleased to learn of his prowess with tulips. Peck has never been successful with tulips, and she encourages the Sprouts to concentrate on daffodils. Besides, rodents are attracted to tulip bulbs and she doesn't want to invite them into the outdoor pits where the bulb pans spend the winter.

One Sprout's reputation followed him all the way to Newport, Rhode Island, where he was playing in a squash tournament. Charley Saunders, a nationally ranked junior player, was approached by an admirer on the sidelines. Was he, the woman wanted to know, by any chance, the same Charley Saunders who had won a blue ribbon competing against her in the Philadelphia Flower Show that spring? He was.

True gardeners, the Sprouts' activities extend beyond the realm of exhibition and competition. Their handiwork can be seen in the perennial borders and planters that brighten their campus, as well as at the Bryn Mawr train station where commuters are cheered by seasonal plantings and containers designed and maintained by the students.

Steve Piltch, head of the School at Shipley, talks enthusiastically about the value of the horticulture program both to the students who participate and to the fabric of school life. He says, "we look for activities that are going to challenge kids, that are going to ask them to reach, that are going to ask them to help figure out who they are, certainly Sprouts helps to accomplish that."

photo supplied by Lelia Peck

Sprouts' Favorite Trough Gardens Plants

Tall:

Crassula 'Gollum'
Aichryson laxum
Kalanchoe tomentosa (Panda plant)

Medium:

Haworthia margaritifera
Echeveria sp.
Crassula schmidtii

Low:

Faucaria tigrina (Tiger jaws)
Sedum dasyphyllum (Love 'n tangles) hardy
Sempervivum sp. (Hens 'n Chickens) hardy

The Sprouts recommend a soil mix of three parts Promix, one part chicken grit and one part Terre-green to create a porous mixture similar to the plants' natural habitat. Fertilize with Osmocote and water sparingly.

These plants are all non-hardy succulents, except where noted. Combine with an eye to size, shape, texture and color, which ranges from emerald to gray-green and you will create a charming miniature landscape. Place your trough outdoors in partial shade for the summer, give it a sunny, cool indoor spot in the winter and your garden will grow for years.



Marban Sparkman is a frequent contributor to *Green Scene* and a Flower Show volunteer who works in the Horticult.

Taking Home the Blue

How Four Gardeners Claimed the Big Prizes

by Barbara Bruno

One blue ribbon winner cited her professional stage career as preparation for her first Philadelphia Flower Show competition. Another's Flower Show debut was a response to a command. Just what is it like to enter a flower show for the first time? Or for that matter, for a thirty-fifth time? And why do they do it?

Many competitors cite a common reason. It is just for the experience of *being there* in a gathering of others as singleminded as themselves. In the heady arena of competition, the horticulturally experienced and the ardent beginner draw together in a kind of surprising and satisfying brotherhood. Really it isn't so surprising, since they are all plant lovers delighted for the opportunity to share their solitary experiences in animated conversations.

Unlikely friendships are cemented over obscure plants, when one admirer meets another. The professor and the social butterfly, the corporate lawyer and the carpenter have much to discuss regarding their ideas on the best soil mixes and their newest acquisitions.

The horticulturally successful are bellwethers in our midst. What rare and wonderful plant will they surprise us with this year? What new techniques will they generously pass along? Where are their style and curiosity leading them? We are free to ask them such questions during those relaxed moments after our plants have been entered. It doesn't seem too far afield to call blue ribbon winners the Flower Show's stars. And here are some of their stories.

Bonnie Corsaro: a First Blue with a Little Help from Holland

"Philadelphia in Bloom," gave Bonnie Corsaro a compelling floral vision. She could see and feel the large arrangement—the essence of a Main Line spring all hazy for forsythia and exuding an elegant garden, yet with a country feeling. She would use "the kind of flowers people use when arranging from the back yard—with a little help from Holland." She saw peach and yellow: the forsythia, of course, and forced glads, snapdragons, yellow lilies. "Nothing exotic," except perhaps the 'Osiana' roses, a "yummy," opulent peach tone to give a refined pizzazz. Creative juices galvanized her into action.

the green scene / january 1998



photo by Ira Beckoff

Bonnie Corsaro won a Blue Ribbon on her first try as an exhibitor with her entry in the 1996 Open Spaces Classes. The judges deemed her mass arrangement in the Philadelphia in Flower Class "Exuberant and vibrant."

The eight-foot by four-foot area assigned for the professional class mass arrangement didn't faze her. "I like large spaces." She confides she'd only be intimidated by miniatures. She had to rein in her theatrical sense of exuberance and passion to accommodate her idea of a classic "Philadelphia feeling." The black urn planter and the stand from Waterloo Gardens seemed just right.

She started by forcing backyard forsythia in four batches, plunging a batch into a bathtub of warm water for 24 hours every two days and from there into vases around the house. The second batch, cut 24 days before set up, was perfect.

She tackled the arranging at home the day before set up, working in a mock-up space delineated by large paper sheeting. She believes the time and quiet that working at home offered was worth the job of transporting the cumbersome mass, especially when she found others at the Show. "arranging in total chaos!" One unplanned move was the sudden inspiration to include salmon zoral geranium flowers from the greenhouse.

Bonnie Corsaro's first entry garnered her a blue ribbon. A time for rejoicing and reflection. Corsaro says being a first-time Flower Show competitor takes courage, as well as talent. Facing the unknowns of

Gerald and Bearice Barad examine part of their extensive cactus collection containing some highly colored specimens at one of their two Flemington, New Jersey, greenhouses.

competition, the initial voyage through Flower Show procedure, and the logistics of getting an arrangement in place on time, can appear daunting. Also there is the fear of defeat that accompanies an entry.

She feels her own "sense of person," developed during her professional music and acting life that included a 10-year stint of singing with the New York City Opera, has helped her brave competition. Along with the ups and downs of stage performance, the theatrical commonplaces of coach's and critic's reviews and the realities of her catering and garden design business experiences, has immured her to criticism and given her the courage "to try just about anything."

Bonnie Corsaro "grew up with flowers and the Philadelphia Flower Show." The memories of her parents' Show involvement smoothed her own first entry efforts. She remembers her father, Tom Lueders, arranging bricks on a paper pattern in the basement, testing garden walkway patterns for a Garden Class exhibit to be mounted by his wife's group, the Huntington Valley Garden Club. This paper template idea is one technique she borrowed, using it to block out her Show space at home.

Corsaro further explains that her mother, Mary C. Lueders is "a true Flower Show veteran of many garden and table classes." Her grandmother, Matilda Borda Cross, was an avid flower arranger, who introduced Corsaro to opera and showed the eight-year-old how to arrange flowers with "turn-of-the-century techniques." Corsaro learned about colors and textures, how to stabilize arrangements with crossed stems, and to use pinholders to advantage.

Corsaro now owns her grandmother's metal pinholders but views them as sentimental keepsakes. She says that floral tape, and, especially, Oasis, were "major inventions . . . the best since sliced bread!" In her role as a speaker on the Garden Club of America lecture roster, she shares techniques useful in flower competition and home arranging, alike, such as hardening difficult flowers and using new professional materials to miraculous effect, e.g. how to stabilize an arrangement in a glass vase without showing the new clear floral tape.

The rewards of Flower Show competition were great enough to tempt Corsaro into the arena again. This year's French theme really "speaks to me . . . *La passion du*





Gerald and Beatrice Barad's Global Green entry of 37 exotic succulents of Africa in the 1997 Collection Class took the **Meadowbrook Farm Best of Week in the Container and Collection Classes** and **The Garden Club of America Certificate of Excellence for great distinction in the Horticulture Section.**

jardin runs very deep in my family." She plans to give her exuberance and passion full rein this time, "to research into the French period and jump in."

Dr. Gerald and Beatrice Barad: Romancing the Desert

The Barads' 1997 plant collection will be a hard act to follow.

Dr. Gerald Barad and his wife, Bea, are up to the challenge, however. Months before this year's Show they were already targeting plants to satisfy the '98 horticultural collection theme, "Pick a Palette," by choosing plants that will evoke a French painter of the exhibitor's choice.

Themes are the wild card of the collection class. Last year's "Global Green" theme seemed a perfect match for the little known, wide-ranging plant group that entralls the Barads. The subject of their entry, "The Exotic Succulents of Africa," was an easy, but inspired choice. That elegantly staged collection of well-grown and groomed rare plants won two blue ribbons over the Show's run, along with three special awards: the Best of Day ribbon, given to the highest scoring blue ribbon entry with two or more varieties of potted plants; The Garden Club of America Certificate of Excellence awarded for great distinction to an exhibit in the Horticulture section; and the Meadowbrook Farm Indoor Gardening Trophy for Best of Week in Container Display and Collection classes.

Staging a horticultural collection is often a group enterprise. The need for numerous well-grown specimens linked by a designated theme and arranged for maximum aesthetic appeal can tax the combined resources and talents of even the most experienced plant organization or garden club. Staging such a collection singlehandedly takes perhaps the greatest degree of plantsmanship required in any horticultural class.

The first hurdle is to devise an entry title that is refreshingly original and hopefully an inventive interpretation of the class's theme. The next step is to furnish a window setting with topnotch specimens from home that illustrate the theme and the competitor's expertise.

As Showtime nears, the Barads will winnow the plant candidates down from 200 or so runners-up to a manageable number. Once again they'll tackle the exacting pre-entry chores of repotting, cleaning and grooming the chosen specimens. As a Flower Show judge of cacti and succulents, Gerald Barad is especially keen to how the fine points of exhibiting can swing a call in a closely competitive class. He points out that an almost imperceptible flaw or oversight can weight the balance between two plants — or collections — of otherwise equal merit.

As they narrow plant contenders, the Barads are mentally firming up staging details. Later as Showtime nears, they will

test their ideas on a mockup staging. The resulting floor plan will assist them on the hectic setup day.

For their fourth window class competition the Barads will choose their Show plants from among a lifetime collection of cacti and succulent plants started by Barad during his medical school years. He was drawn to the plants then by their "marvelous textures." His interest assumed passionate dimensions when the beauty and variety, the mysteries, challenges, and breadth of possibilities offered by this diverse, but still little known, group were stunningly revealed to him. That still fresh revelation occurred when he attended his first convention of the Cactus and Succulent Society of America in 1949. He allows that from that point the plants "became a major part of our lives."

In pursuit of knowledge, Barad, often accompanied by his wife, became a global traveler to the remote deserts and semi-deserts of every continent. He has studied habitats and searched for new or rare species in such diverse areas as Argentina, Chile, India, Kenya, Namibia, Madagascar, Mexico, Morocco, Peru, South Africa, Somalia, The Sudan, Tanzania, Togo, Yemen, and Zimbabwe, as well as the American Southwest. Two species bear his name to honor their discoverer.

The retired doctor and his wife now tend a worldclass collection housed in two greenhouses that span 3,600 feet of floor space.

At her greenhouse, Dorrance Hamilton tends variegated *Hibiscus* standards in the early stages of training. The front, tricolor plant is *Peperomia elusifolia* 'Variegata'. Dorrance and her late husband Samuel won the Horticultural Sweepstakes at the '95, '96 and '97 Shows.

Picture no empty spaces among the neatly arranged and well-tended legions and you will have a dim idea of Barad's avid devotion. His collection numbers around 15,000 plants representing perhaps 8,000 species. Many of the finest examples have been raised from seed or grafted by the plantsman, to be grown on to impressive maturity.

Flower Show plant candidates are gathered early to a special bench where they receive added attention. The division of the two houses into three temperature zones set at 40°, 50°, 60°F minimums serves the varied collection's needs. The temperature span also allows for gently forcing or holding back Show plants. Many plants shown by the couple are winter-blooming so need only an educated prod toward synchronizing their bloom peaks with a Show date. This is especially true of many hybridized genera and species, but other seldom-grown and perhaps never-before-forced species are more challenging.

Barad moves chosen specimens to hand-made Show pots. As an experienced competitor and a Flower Show judge, he understands that in a closely competitive Show careful grooming can bring home a blue. Using a mockup of the window display area, the Barads perfect their entry arrangement at the last moment and from there it's on to the Show.

Mr. * and Mrs. Samuel M. V. Hamilton: Winning the Horticultural Sweepstakes

What does it take to win 45 blue ribbons, 54 seconds, 64 thirds, and 61 honorable mentions and the 1997 Flower Show Horticultural Sweepstakes Award? Determination and unflagging enthusiasm, for a start. Dorrance "Dodo" Hamilton has both of those prerequisites — and also the prerequisite greenhouse space — enough space to bring to perfection the large numbers of entries needed to accomplish this astonishing feat.

If you had walked around one of Mr. and Mrs. Samuel M. V. Hamilton's 1997 horticulture entries, an enormous, bloom-engulfed flowering cactus, you would have been as hard pressed as the judges to find a straggling stem or a flagging bloom among the exuberant masses of its flowers. This specimen *Nopalxochia phyllanthoides*

*It is with great sadness that we report that Mr. Hamilton died November 1997.



'Deutsche Kaiserin' is a veteran blue ribbon winner and a perennial crowd pleaser. Entering such large plants in the Flower Show Horticultural Classes has become a specialty of the sweepstakes-winning Hamiltons. Along with the almost unbeatable flowering cactus, their luxuriant ferns and exquisite flowering standards shaped from nonhardy azaleas, Martha Washington geraniums, and *Pachystachys* hybrids, among many others; and their impeccably clipped topiary myrtles, have been dependable blue ribbon winners. Mature specimens of near faultless form are testimonies of long-term commitment and are tough to

beat. The difficulty of training then maintaining perfection over time and of transporting cumbersome specimens festooned in fragile bloom safely to and from the Show is reflected in the awards these symmetrical marvels often garner.

But the Hamiltons haven't held the Flower Show sweepstakes trophy for the last three years only on the strength of large, imposing specimens. Entries in many classes are needed to win. To claim the Pennsylvania Horticultural Society's highest horticultural award, a competitor must accumulate the greatest number of points awarded to any exhibitor in the Horticultural



Lee Raden, former president of the North American Rock Garden Society and frequent winner of top awards in the Horticultural section of the Philadelphia Flower Show is shown at his home greenhouse with *Cyclamen graecum alba*, one of a large collection of species cyclamen. At the '97 Show Raden won PHS's Best of Day in the Horticultural Classes for his *Draba mollissima* at the opening day judging; on Tuesday and Friday he won the North American Rock Garden Society, Delaware Valley Chapter, ribbon as the outstanding blue ribbon winner for his *Draba longisiliqua* (Tuesday) and for his *Primula auricula* "Camelot" entry on Friday.

quent judging days throughout the Show's run. Consecutive entries of an outstanding plant is a great way for any contender to increase total points.

When the Hamiltons entered their first Flower Show in 1983, they brought with them a comparatively modest assortment of plants. But orchids, then as now, were high in the Hamiltons' esteem and topped their list of ribbon winners as the number of entries increased over the years. And then, as now, Dodo Hamilton found competing exciting. She enjoyed mingling with many of the area's master gardeners and the chance to learn more about plants and exchange fine points of competing with other top winners while in the heady pre-Show atmosphere of the competition area.


The Hamiltons' greenhouse complex has expanded as Dodo's interest has grown. There are now six greenhouses with a combined floor space of more than 5,000 square feet. A span of temperatures, from 72°F for the orchid house to a low of 50°F gives great forcing flexibility. There is also a large holding greenhouse set at a 50°F minimum temperature for overwintering plants, such as the azalea standards, which require a rest period. This space also serves to slow Show plants from hurrying too soon toward full bloom.

The plant collections have a double focus. The greenhouses and estate gardens provide year-round cut flowers for twice-a-week flower arrangements throughout the house. Prospective Flower Show plants fill much of the remaining space. Dodo Hamilton annually adds numbers of potential future ribbon winners to the mix. Orchids are still a favorite and subsequently that collection is the largest. The multiple pots of the 300 or so species and hybrids include some enormous older specimens sprouting a forest of bloom scapes. The collection is divided about equally between species and hybrid varieties. The continuous bloom schedule created by progressive genera, species, and hybrids enables this family to fulfill the dual roles of Flower Show entries and as year-round cut flowers and blooming

tural Classes.

In 1997 the Hamiltons entered around 350 plants, including species and hybrid orchids, herbs, forced hardy and nonhardy bulbs, rock garden specimens, cacti and succulents, topiaries as well as many others. They entered these plants in a wide array of classes, some calling for more than one

plant, e.g. Miniature Garden Landscape, Matched Pair, Rainbow Collection, Parent and Offspring, Tender and Hardy Plants-Same Genus, and Succulent Collection. The number they entered is an individual record for the Horticultural Classes. Some specimens, like the topiaries, were reentered in the same or different classes on subse-



potted specimens for the house. The demands of such an extensive collection require some help. Mrs. Hamilton's estate manager, Joe Paolino, is in charge of the gardening staff and assists Mrs. Hamilton in day-to-day greenhouse management.

This year, in addition to her Competitive Class entries, the Mrs. Hamilton's interest is focused on their Nonacademic Educational Class exhibit: The Little House Shop. The theme for their garden setting is "The American versus the French garden."

Lee Raden: Intrepid Competitor

Perennial ribbon winner Lee Raden's first Flower Show entry was a command performance. When the Pennsylvania Horticultural Society's former president, Ernesta D. Ballard, said, "I expect you to exhibit in the Philadelphia Flower Show," Lee's entry was assured, since "you didn't say no to Ernesta!"

At that first Show, he was struck by the concentration of knowledgeable plantspeople gathered in the competitive area. That first impression has held true. After wide national and international travel to flower shows and plant society meetings, Raden, a past president of the North American Rock Garden Society, still maintains that the Delaware Valley harbors a higher concentration of expert gardeners and that "great people," some of the nation's best plantspeople, contribute a standard of excellence to the Philadelphia Flower Show.

At the time of Raden's first plunge into Flower Show competition, he was already deep into rock gardening. Starting off with "what I knew best," he became known for his petite, exquisitely grown alpine rarities. "I like minute plants," he smiles, as he goes on to quote the old rock gardening joke, "If you can see it, I don't want it."

In 1975 Raden took another plunge. Pairing up with Julie Morris, then PHS librarian and a fellow Rock Gardening Society member, he entered the Window Collection class. At that time the class was defined as a collection within a botanical family. Satisfying that criterion with several dozen forced, peak-condition plants was a horticultural labor of love reserved for the nonfaint of heart. It tested a grower's plant knowledge, cultivation and forcing skills, and stamina. And it offered the showgoer a rare opportunity to study a diverse group of related plants shown together in top form.

The team's first entry was a fern collection of 45 plants. That first year established

a collaboration and set a mode of operation that worked successfully through 15 years of competitions. Over that time their instructive, well-grown collections of ferns, primroses, alpiners, and miniature and species bulbs were much admired.

They started planning for each entry two years in advance by choosing a theme. They'd split the 200 or so potential Show

The retired doctor and his wife now tend a worldclass collection housed in two greenhouses that span 3,600 feet of floor space . . . His collection numbers around 15,000 plants representing perhaps 8,000 species.

plants between them, growing them on in their respective greenhouses. Meeting in January, the pair would exchange plants to hurry growth along in Morris's warmer greenhouse, or to retard it in Raden's cooler quarters. For the two days preceding a Show, they'd "hardly get any sleep," sitting in Raden's kitchen far into the night washing pots; deadheading, grooming, cleaning, and dusting plants. They'd choose 50 to 55 of the best specimens, repotting them in handmade ware with simple, but handsome lines. Choosing to work with the plants as they were at setup time, they never did a mockup or a floor plan in advance.

Like many avid gardeners, Raden's winter gardening evolves around his Flower Show activities. In fact, you could say his life revolves around his intense gardening interests. He quotes his son's humorous observation about his obsession, "Dad, with your addictive personality, thank God you found horticulture — just think, if you were into drugs!"

Raden had perfected his forcing methods by the time he returned to solo competition. He uses a basement bank of 12 fluorescent lights, an area of mercury vapor lights high in ultraviolet spectrum light for forcing alpiners, and a refrigerator for harnessing precocious bloomers.

In 1979, when he perused a flyer from Kirstenbosch, the South African National Botanic Garden, his interest was aroused by the "new and strange" plants of South Africa, some with "incredible colors" of foliage. "A new world opening up," offering a curious gardener the chance to stretch the mind and gain new and refined horticultural techniques. Worldwide, the gardening community was eyeing the opportunity for

zestful competitiveness with "tremendous interest." The "Brits," as represented by the Alpine Garden Society and the Royal Horticultural Society, as ever were ahead, but American gardeners certainly could rapidly catch up. He joined the South African National Botanical Society. They had a seed list.

Since then his interest in South African alpine flora has evolved toward the area's many unfamiliar small bulbs. By last fall his greenhouse benches displayed abundant testimony to years of successful seed sowings. South African bulbs in variety were just beginning to break dormancy, some yet to reach bloom size, others multiplying in their satisfying maturity, while other pots were showing the delicate, hairy forests of newly germinated bulb seed. There were *Albuca* and *Watsonia* and the related and more familiar *Gladiolus* in multiple species, and *Geissorhiza*, an inhabitant of South African alpine screes.

In theory these plants make ideal Flower Show subjects, since they are winter blooming in the Northern Hemisphere. Many hybrids and some genera, such as *Lachenalia*, "break now and bloom dependably in March to April." But the wild species can be a challenge to grow and especially to flower on schedule. Raden is pitting his skill this year against a few that "have minds of their own." He'll try his hand with *Romulea*, among others, for this year's Show.

However fascinating these South Africans, lots of other interesting Show candidates hang around at Raden's place. He observes that American *Fritillaria* are "harder to grow than the Asian ones," and Raden is readying a near extinct South American native called *Tecophilaea violiflora*. If all goes well, this electric blue rarity, and well — let's face it — a bit of a "snob's plant," may add to Lee Raden's satisfaction quota by bringing home yet another blue, or the supreme satisfaction of Best of Show.

Check it out. Check them all out at the Show.

Barbara Bruno cautions that winning blue ribbons can be addictive. She cultivates her own blue ribbon winners and contenders in a former chicken house that she retrofitted to serve the practical purpose of an 18th century orangery, a cool, sunny, large-windowed building designed for overwintering potted orange trees and other exotics. Bruno is an author and illustrator who writes frequently about her gardening experiences on an old New Jersey farm.



illustration by Signe Wilkinson

GROWING GARDENERS

What's Happening at the Gardener's Studio

Talking Over the Garden Fence at the Flower Show

by Patricia McLaughlin

The Gardener's Studio at last year's Philadelphia Flower Show turned out to be "a good way for people to share the things they liked," says Mike Slater, who shared hypertufa troughs.

And a good way of showing novices how to rough up root balls.

And a chance to inveigh against the old wives' practice of bundling up fading daffodil foliage neatly in rubber bands.

Elise Payne's first gardening memory goes back to when she was about three years old: "It was during World War II, and I was at the victory garden with my father, and he was letting me plant radish seeds. Put in a radish seed, and then three finger spaces. I remember he said, 'Don't put

them so close, you're wasting the seeds.' "

Sandy Salkeld's dad was the vegetable gardener in the family; her mom specialized in flowers. She learned to grow things early, and then she married into a family of prize rose growers and learned more.

Mike Slater says he "started out helping my mother. I was head transplanter when we moved one time." So he learned to dig up and move perennials, shrubs, even some trees.

That's the way it used to be: Gardening know-how was practically genetic, passed down from parents and grandparents. From the time you were a little kid, you watched, and eventually you helped, and you learned without even noticing you were learning.

By the time you had a garden of your own, you knew — it seemed you'd always known — which end of a tulip bulb was up, and how to pinch back chrysanthemums, and how to free the potbound roots of a new azalea before you put it into the ground.

You know the skills you acquire as a child, almost by osmosis, are only the beginning. Hard core gardeners read magazines about gardening, buy books about it, pore over mail order catalogs, join plant societies, take trips, go to shows, compare notes and specimens with gardening friends and neighbors and total strangers. They even, if they have the technological wherewithal, surf the Internet in

search of new ideas, new techniques, new varieties, or hard-to-find heirlooms.

But the basics are crucial, and increasing numbers of potential gardeners are growing up without them. Their dads grew businesses instead of tulips. Their moms transplanted hearts and kidneys instead of perennials. Their grandmas lived in high-rise condos. And they themselves were on three different soccer teams the whole time they were growing up, plus violin lessons and chess club and skateboarding. So when

The basics are crucial, and increasing numbers of potential gardeners are growing up without them.

would they have had time?

It's not only gardening this is happening to: All sorts of homely skills, transmitted from one generation to another for centuries, are disappearing. Recently I told a friend I'd spent the evening before patching a torn slipcover. "Mom, what's patching?" her 12-year-old piped up. There's a whole new generation of cookbooks aimed at people who honestly don't know how to boil water, and who have to be told that before you make potato salad, you have to cook the potatoes.

For gardening virgins, the moment of truth arrives when they buy houses that they decide would look prettier with things — plants of some sort, they suppose — growing around them. It's gardening as exterior decoration. At that point — at least if they start the way I did — they send for some catalogs and order a lot of expensive plants and kill them.

So some give up: "Guess I just don't have a green thumb," they tell themselves philosophically. The Philadelphia Flower Show's Gardener's Studio is meant for the rest of them, people who aren't gardeners yet, but who haven't given up on the possibility.

It'd never occur to them to search out a whole lecture on growing orchids or to choose delphiniums for the perennial border or cultivate old-fashioned roses. But they're interested enough to go to the Flower Show. They're curious. They're open to suggestion. They have questions. And if, as they stroll from one splendid display to the next, they happen to notice somebody actually doing something — untangling a root ball, dividing a clump of succulents, rusticating a trough for alpine, or otherwise caught in the act of gardening — they might stop for a few minutes and watch, and listen, and even ask questions.

This was the intention behind the Gardener's Studios, which debuted last year. They're half-hour show-and-tells given right there on the floor of the Flower Show



illustrations by Signe Wilkinson

and designed to transfer gardening know-how from experienced gardeners recruited from local plant societies, garden clubs, other horticultural organizations, and just excellent all-around gardeners to halfway interested passersby.

Well, some of them turned out to be more than halfway interested. Pat Pitkin, from the Philadelphia Rose Society, says she's never seen anything like it. She arrived for her first Gardener's Studio wondering how on earth — right out there on the floor in the middle of the Show — she was going to draw an audience, and was amazed to discover, five minutes before she was slated to start, that people were lined up four and five deep, waiting for her. "They were just hungry for information," she says, and were "asking serious questions — about some of the new shrub roses, about taking care of their roses, about which roses would do best in their locations."

Besides answering questions, and doing a presentation on how — and how deep — to plant a rose bush, Pitkin passed out lists of consulting rosarians and local rose societies all over the area. Location can make all the difference to roses, she explains: "New Jersey has sand, and you can pour water into it forever and it pours right through, where other sections — like here [Pitkin gardens in West Chester, Pa.] — have hard clay, and you pour water into it and you get a bathtub. That's the reason for local rose societies: They help you grow roses in your particular area; they can tell you which roses do well there as opposed to at the seashore or in the Poconos or wherever.

What Mike Slater thinks drew people to the Gardener's Studios — and he dropped in on several — was the appeal of "people doing things they were enthusiastic about." It was, he says, "a good way for people to share the things they liked." He remembers a group of fascinated kids clustered around Dr. Gerald Barad, from the Philadelphia Cactus and Succulent Society, spellbound by his demonstration of how to divide succulents. And a representative of one of the seed companies who was showing how to start seeds "was very enthusiastic and

had a lot of kids interested. I noticed a lot of people coming by would just be caught by it. It might not be something they'd go out of their way to see, but if the subject caught their attention, they'd stop."

Slater himself made a hypertufa trough from scratch. He's been fascinated by tiny alpine plants with their outsize flowers ever since he first learned about them in an ecology class, and he says they "look particularly nice spilling over the edge of a stone trough. But old watering troughs are hard to find, and when you do find one they're expensive." The last one he came across sold for \$1,000, which he considered "a bit much for a planter."

A homemade hypertufa trough is a bargain by comparison. During his presentation, Slater mixed up a batch of the material — a mixture of cement, peat moss, perlite and water — and poured it over a pile of sand he'd patted into a flat-topped dome shape and covered with plastic. He explained that in 24 hours the goop would be firmly enough set that he'd be able to take a gouge or a wire brush to the outside of his new hypertufa bowl and rough it up to make it look like natural stone. "Then you cover it up and leave it for three to four weeks to let it cure and harden," he said. Then Slater showed off a finished trough planted with alpines that he'd brought along "to show people the kinds of things you can grow."

What he liked about the demonstrating at the Gardener's Studio was "the chance to actually slop the stuff around and show people how to do it right in front of them, so they can really see how you do it." He thinks the learning style of seeing things happen right in front of you works especially well when you're teaching technique — for example, "when you're showing people how to divide plants or make cuttings." It's something video instruction does well, he says, adding "only a video doesn't answer questions from the audience."

Finding live people to answer questions isn't easy anymore, notes Ted Stecki. Our



stereotypical gardening virgins with the new house that needs some exterior decoration typically go down to the local garden mart one Saturday in April or May, when the place is frantic. Stecki says it's only when they get there that they start thinking about what they want to plant. "Husbands and wives get into more arguments," he says. It may not even occur to them to wonder what will grow best in their yard and, if it does, the person they ask will likely be a teenager who, until a week or two before, was flipping burgers at a fast food restaurant. So they end up picking out some plants because they like the way they look, and "buying things you can't possibly grow just because they look nice." Then they take them home, stick them in holes in the ground, and wonder why they don't grow. (Of course, some people will virtually guarantee that they don't grow by carefully adding a lot of nice dry peat moss to the hole first.) "Nobody tells them how to plant it, how to fertilize it, how to prune it. And the plant they bought in the spring is dead by summer," Stecki says.

So, in his Gardener's Studio, he demonstrates — with considerable relish and to the horror of some innocent bystanders — just what you need to do to that plant's root ball between the time you take it out of the pot and the time you put it into the ground. Stecki, a stalwart of the American Rhododendron Society, begins by grabbing a pot-grown azalea and tipping it out of its pot. "Watch me kill this plant," he says gleefully, as some members of the audience begin to look concerned.

"All this plant knows for three years is living in a pot," he explains. Its roots don't know there's a world out there, but they're about to find out. Stecki takes his shears and begins viciously poking and slashing at the rootball, drawing gasps from some in the audience. Sometimes, he says, "people are almost yelling at this point: 'You can't do that!'"

"People are afraid to condition plants," he says. Plants need conditioning. "The roots are normally compacted and very tight," he says. "You feel like you're grasping a basketball. You grasp that basketball and try to pull the roots out of it. If you can't separate the roots with your fingers, you take pruning shears and cut into the root ball about a half-inch, then pull them apart."

If you don't loosen the root ball, he tells his somewhat scandalized audience, "It just dries out. The ground takes all the moisture. The roots strangle the plant: the water doesn't get into the root ball, and the plant doesn't put new roots into the soil. And if you can't knit into the ground, then you don't survive. The plumbing isn't there."



Signe Wilkinson is the editorial cartoonist for the *Philadelphia Daily News*. Look for her 1999 gardening calendar, "How to Grow the \$735 Tomato."

Once he's persuaded them that it's OK, even necessary, to perpetrate such violence on an innocent rootball, he moves on to the rest of the planting process. How deep you plant it (not as deep as you think), how you prune, when you water. Not to forget location, location, location.

I always thought a somewhat tender plant would appreciate a cozy south- or west-facing wall: all that nice winter sun. But no. "Plant that are tender, you'd think you plant on south side," Stecki says. "But the north side is better." With a southern exposure, he explains, they'll start to grow and then freeze hard again a dozen times in February and March, which would discourage anybody. That must be why my new Catherine Woodbury daylily, which looked so healthy and green and eager to start growing in February, was brown mush by May before it ever had a chance to bloom.

And so the Gardener's Studios went, one experienced gardener after another telling groups of interested people things they might never have guessed, and showing them how to do things they might never have dared try by themselves. Sandy Salkeld from the Herb Society of America, Philadelphia Unit, did a half-hour demo on building tussie-mussies — and explained to her audience that the cheerful little bunches of flowers called nosegays got their name because, in the days of open drains, ladies carried them around so that when they encountered a ghastly smell, they could bury their affronted noses in the fragrant bouquet. And Elise Payne, of the Delaware Valley Daffodil Society, showed off a range of narcissus colors and reminded her audience which end of the daffodil bulb is up, and showed them what a prizewinning pot of daffs looks like tipped out of its pot. Except that it took more than mere tipping; it took Payne and her co-presenter, both tugging with all their might, to get those bulbs out of that crowded pot, which the audience found vastly amusing. And Milton Lonker, of the Philadelphia Cactus and Succulent Society, brought along a variety of cactus and euphorbias, and showed

people how to tell which is which, and answered all their questions about getting their Christmas cactus to bloom.

Which might not have all the warm fuzzies of your sweet old granny helping you plant your first crocus way back when you were knee-high to a praying mantis. But, as Art Wolk points out, learning to garden this way also has certain advantages over the traditional handed-down-from-grandma way. Wolk did a show-and-tell on hardy bulbs, and he made it a point to tell his audience that it's **not** a good idea to truss up floppy, fading daffodil and tulip leaves into neat little bundles with rubber bands, no matter what their mothers or grandmothers told them. A neat garden is a fine thing, he agrees, but it's not worth starving your bulbs for, and — as Wolk's audience learned in no uncertain terms — those fading leaves are photosynthesizing like mad to nourish the bulb they came from so it can send up more flowers next year. Hands — and rubber bands — off!

Expert Speakers Recruited for the Gardener's Studio

Organizing the Gardener's Studio schedule, held every hour-on-the-hour every day of the Flower Show, at two studios located on the exhibit floor, requires recruiting enough willing experts to fill more than 160 slots. **Anne Kellett** and **Lee Raden**, Flower Show volunteers extraordinaire, took on the job as co-chairs of the Gardener's Studio Committee and successfully helped to launch the new project in 1997. They continue as co-chairs for the 1998 Gardener's Studio. If you would like to volunteer, call Mindy Maslin at (215) 988-8844.

Patricia McLaughlin writes the Style column in *The Philadelphia Inquirer Sunday Magazine*. She gardens in the Spring Garden section of the city and is a volunteer weeder at the Eastern State Penitentiary.

Nubuo Sugino came from Japan to collect pressed plant exhibits for the World's First International Exhibit of Pressed Flower Art in Nagano, Japan. He stayed to collect First Place for his Dinner is Served/Pressed Plant Material Class entry at the '97 Philadelphia Flower Show. The judges commended the "Elegant design showing great courage."



PRESSING MATTERS

by Vickie Mowrer Lashley

The theme of last year's Philadelphia Flower Show "The Great Exchange — People, Places and Plants" expanded international participation in all areas of the Show. In addition to the many wondrous pleasures that the Philadelphia Flower Show brings to its visitors, those people who have a passion for pressed plants had an extra treat. In the Pressed Plants competition a first-time entrant came from Japan; he not only entered prize-winning work that excited and inspired, but became a teacher, patron, mentor and friend to many Americans.

Nobuo Sugino of Fukuoka, Japan, does not come to pressed flowers by accident. His mother was a plant and nature lover and his father, Toshiyuki Sugino, a chemist who helped Nobuo's botanist grandfather to devise methods to press and preserve flowers better with a particular interest in improving color retention. It was his father that built Nobuo's first flower press. These influences, in time, led Nobuo to become a Master of this art form known in Japan as

"Oshibana" or "The Art of Pressing Flowers."

Color retention has always been the bane of the flower presser's existence and is one of the major reasons their work is not regarded with the esteem that it deserves. The defense of the artists is that if the design is well conceived the color changes will have been considered, and not only will the work be beautiful when it is unveiled, but perhaps even more beautiful when the colors change and a new kind of subtlety emerges. Being a presser myself I find myself sympathetic to both sides of the question. I, too, defend my work in terms of its future beauty, but I must admit I'm disappointed when I notice color changing in a piece. Sugino's efforts and inventions have given us new inspiration and reason to forge ahead.

The First International Pressed Flower Art Exhibit in Japan

The day that I received a letter in the mail from Japan, my personal flower press-

ing life was altered forever. Sugino had heard that I had developed an unusual way of preserving pressed plant material in my artwork (see "Painting with Beeswax — *Green Scene*, Nov/Dec 1996) and requested a meeting with me in Philadelphia. I accepted the invitation. During our meeting I learned that this young Japanese man had perfected new techniques and tools that would prevent flowers changing color for a very long time. He shared his dream to bring pressed flower art to the fore by organizing an exhibition in Japan of work that he had collected from artists from all over the world and the establishment of the world's only museum dedicated to the history and art of the pressed plant (scheduled completion 2001). Then, he purchased my work to be part of this exhibition and museum collection.

Eugene Burkhart, a prominent "presser" and award-winning Philadelphia Flower Show exhibitor, and I were officially invited to visit Japan to attend this international event to lecture on how we create our work. The Japanese accurately consider Eugene to be a Master in the pure American tradition and hold him in high regard; they invited him to be part of the ribbon-cutting ceremony that would launch the event. Eugene started pressing flowers and en-

tered his first competition in 1953 at the Muhlenberg County Flower Show when he was six years old. He treasures his ribbon from that Show.

I was asked to present my new technique of preservation with beeswax plus my minimalist style. I received intensive instruction in Sugino's techniques so that I could teach them in my own country. PHS participated by providing the ribbon winners' work from the Dried Plant Jewelry competition and helping to make it available for display.

The World's First International Exhibition of Pressed Flower Art, which was conceived by Nobuo Sugino, sponsored by the city of Nagano and supported by a consortium of Japanese corporations, officials and friends, opened on July 25, 1997, in Nagano. It was held in conjunction with the Nagano Olympics Festival of Art and Culture, conducted as an overture to the 1998 Winter Olympics to be held in February 1998. The building where the Olympic skating competitions will take place was home to the Exhibition. A total of 1,383 pressed flower entries were exhibited in a spacious 16,060 feet of floor space. Entries from 15 countries were represented. The projected number of attendees for the three-day event was 10,000;

continued

The Practical Side of Pressing Plants

Plant pressing had its recognizable start in the West with the great plant explorers of the late 17th and early 18th centuries. From 1750 to 1850, Philadelphia was the hub of botanical exploration. Our most recognizable collector was John Bartram, whose work is now held in England. Our local treasure trove is the Academy of Natural Sciences. The Academy holds the collections of Benjamin Barton, Henry Muhlenberg, Lewis David von Schweintz, Frederick Pursh, and Thomas Nuttall. These men provided the foundation for North American Botany. Also in holding at the Academy are many plants from the Lewis and Clark Expedition as well as Captain Cook's second voyage to the islands of the South Pacific. The institution is busily collecting live specimens to duplicate those discovered during the Lewis and Clark Expedition. These plants along with some herbarium specimens will be on display at the 1998 Philadelphia Flower Show as part of the Academy of Natural Science exhibit. (See *Lewis & Clark: The Philadelphia Story*, by Elizabeth McLean, pages 9-12.)

In the early days the botanists picked their chosen plants and placed them directly into their presses. At nighttime these were placed just close enough to the fire to receive enough, but not too much, heat. During the day, they were placed in the sun to expedite the drying process. Heat and air are essential to achieve a good pressing and to prevent the plants from molding or rotting in the press. I suppose they hoped and prayed for breezy dry weather. Later in the 19th century after the Industrial Revolution, metal containers made from jappanned tin called "vasculums" were used to carry specimens. It kept most plants in good condition for a whole day while the collector conducted his search. Wet cloth or paper was placed inside to prevent the plants from shriveling without actually getting them wet. Today's plant explorers carry their specimens in plastic baggies, but not much else has changed. If they are really out in the wild, fire and sun are still the key drying elements.

V.M.L.



Artistic Sweepstakes winner [to an individual]: Eugene W. Burkhart, Jr. Burkhart accumulated the greatest number of points in the Artistic Classes for his entries in the Niches, Miniature Arrangements and Pressed Plant Material Designs. Shown here is Design for Pressed Plant Material Class 143: A colorful three-dimensional birdhouse for which he won first place. The judges cheered "Lucky bird to live in this creative abode." Eugene Burkhart is a member of the Berks County Horticultural Club.

PRESSING MATTERS

photos by Ira Beckoff



The two necklaces shown here went from the Philadelphia Flower Show to Japan for the World's First International Exhibition of Pressed Flower Art. **Top left:** At the Philadelphia Flower Show Virginia Simonin's design of Native American Jewelry made from dried plant material won a Second in the Heritage Class. The judges deemed the design "Very effective, using [a] delicate balance between materials." Simonin is a member of the Wissahickon Garden Club. **Top right:** An Egyptian Necklace: Treasures of the Nile created by Barbara Keenan of the Huntingdon Garden Club. The Flower Show judges praised Keenan's "Beautiful craftsmanship," which took a Second in the Class. **Bottom right:** Tree of Life, created by the author, was purchased by Nuguo Sugino to display at the World's First International Exhibition of Pressed Flower Art. Vicki Mowrer Lashley used *Gallardia × grandiflora* for the design, and flax and cotton to make the paper, on which she placed the design. The unpigmented bee's wax used to bind plant to paper gives a luminescent quality to the finished work.

If we think of plant fossils as pressed plants then Nature pressed the first flower and the oldest specimens known are 400 million years old.

40,215 people came.

The exhibits, all displayed side by side, varied from country to country. Individual artists were influenced by their culture and the plants that exist in their particular regions. For example, the pieces created by New Zealand artists Gil and Jessie Jetley, were heavily influenced by the abundance of sea plants such as sponges, plus mosses and lichens. Some work that I thought was particularly wonderful and artful came from the Ukraine and France. While I realize that different styles appeal to different people, I cannot conceive that anyone would not be impressed with the still life compositions of Bobrova Clara, a woman from the Ukraine who uses nothing but bits and pieces of birch bark to create these masterpieces. I never realized how many colors the bark of a birch tree contained. Rene Dhombres, a gentleman from France, uses primarily leaves and bark to create incredible surrealistic landscapes. Photos of the work of the exhibiting artists are shown in the art books that were printed to catalog the show. (See box to order the Show catalog.)

Japanese work was on display for competition while the international work was for exhibition only. The Japanese pieces were breathtakingly magnificent and creative. They do not have the same rules and regulations that our American competitive classes do. They can use watercolor, pastels, fabric, even mirrors to achieve the effects they want. But the primary element is flowers — flowers with color intensity such as we have never seen. Eugene Burkhart was invited to help judge this competition. He said it was one of the most difficult things he has ever had to do. Each of the 500 pieces was equally stunning. "I came away feeling that our Exhibition restrictions get in the way of creativity. I was also aware that the appreciation for the art form in Japan is much higher than here in the States. The artists are held in high regard."

A Pressed Flower Post Card Campaign

Flower pressing, very popular in Japan, is regarded as an art form. It has grown in popularity in large part through Sugino's network of Oshibana clubs that offer their more than 10,000 members education and an opportunity to meet with both hobbyists

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Newsletters

Fertile Acres Press, Theresa Phillips, Editor, 504 S. Old Middletown Rd., Media, PA 19603 — \$15.00 per year — 4 issues

SASE for information to Celestine Hannemann, 9618 Gerald Avenue, North Hills, CA 91343-2602

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Thanks to: Yoko Nakamura & Yukiko Douglas for translation assistance.

and professionals. His delightfully infectious personality, absolute love of pressed flowers, personal philosophy, ingenious techniques and products all play a part. He has written, "Nature views all people equally. Therefore, people must love and protect nature. I believe that exchanges between people of the world through pressed flowers, which are in themselves part of nature, is one good way of eliminating these strange preconceptions we have about others that are based on what we see on television and read in magazines and newspapers."

This statement refers in part to the Pressed Flower Post Card campaign that he helped to initiate in Japan. Sugino says, "... by popularizing pressed flower greeting (post) cards, I wanted to offer a way to express heartfelt thoughts without words, so that people throughout the world can better communicate." At the Exhibition tables were set up with all the materials, supplied free of charge, required for a visitor to make postcards. Volunteer instructors were there to help. Each visitor made two postcards. One they could take home, and one they placed in a giant red mailbox. Those in the mailbox will be

distributed to all of the Olympic athletes and people who come from other nations to attend the Olympic games. People young and old loved this activity; the total of 6,032 faces were lit with wide smiles as they constructed the cards and deposited them in the "mail."

It is timely that this interest in communication via plants is experiencing a revival. Philadelphia is still a botanical hub. It should stand proud as such and continue to show itself off. Philadelphia and its surrounding communities abound with horticultural enthusiasm and know how. And each year the Pennsylvania Horticultural Society brings all that skill and talent together under one roof at a time of the year when winter-weary souls need green, flowery, fragrant things to lift their spirits. Plant pressers in our area are fortunate. It's because of the Philadelphia Flower Show that the largest concentration of flower pressers in America exists here. It's what drew Sugino into our midst. Many of the pieces on display in Japan were procured from the Philadelphia area and at the Philadelphia Flower Show. So kudos to PHS for encouraging a continued and expanded dialogue between people of the world and the kingdom of plants.

Area Artists

Area artists whose work was on display at the World's First International Exhibition in Japan; they are featured in the Art Books Vol 1 and Vol 2.

Eugene Burkhart, Blandon, Pa.
Pat Fox, Del.
Jeanne Helmers, Spring City, Pa.
Emilie Lapham, Philadelphia, Pa.
Vickie Mowrer Lashley, Philadelphia, Pa.
Theresa Phillips, Philadelphia, Pa.
Sandy Puckett, Ohio
Puth Seikman, Sellersville, Pa.
Dianne Silhanek, Md.
Gloria Walsh, N.J.

Jewelry Artists

Some of the jewelry on display at last year's Flower Show went with me in my suitcase to Japan. It was displayed in a special glass case. The following artist-exhibitors were willing to take the risk to have their jewelry take such a long journey to be part of such a historical event.

Barbara Keenan
Virginia Simonin
Sally Yow

Vickie Mowrer Lashley is a frequent contributor to *Green Scene*.

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*Area horticulturists
search for plants in a
remote China province
on a dangerous
Korean border.
See page 4.*





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15.



26.

Front cover: Delaware Valley Region plant explorers looked down from Chang Bai Shan (Ever-White Mountain) to the Yalu River in China dividing them from North Korean fields. Here the climate is similar to that of the Delaware Valley Region. See story on page 4. photo by Paul Meyer

Grow with us.

in this issue

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CORRECTION:

The photos accompanying the article "Forcing the Major Minors" by Art Wolk in the January 1998 issue of *Green Scene*, pages 29 through 32, were taken by Art Wolk. They were incorrectly credited to Arlene Wolk.

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the green scene / march 1998

Green Scene Extends PHS's Borders to China and Welcomes Cleveland Botanical Garden Member Subscribers

 by Jean Byrne

In September when PHS installed external e-mail, my first letter went out to China to clinch an article offered by Bill Stieg who was covering the plant explorations of a group of American horticulturists. The plant explorers included Paul Meyer, the F. Otto Haas director of Morris Arboretum of the University of Pennsylvania in Philadelphia, and Jeff Lynch, nursery manager at Longwood Gardens in Kennett Square, Pa. Bill and I communicated by e-mail and Fed-X to do our work, and I couldn't have been more thrilled had I been sitting next to Alexander Graham Bell when Bell placed his historic phone call.

In that story from China, Paul Meyer tells how as a child he worked in his parents' and grandparents' gardens and even grew a champion tomato when he was just six. He credits his lifelong interest in horticulture and plant explorations to his gardening experiences as a child: "It's in my blood, and it points out to me as an educator how important it is for kids to get that early connection, whether it's a gardening connection, or some sort of connection with nature. So share your garden with your kids."

To encourage and celebrate children in

the garden, this issue also features three stories about children. The first story, Reading, Writing and Rototilling, is about a school garden built by 28 teachers from all over Cleveland, Ohio, as a result of a project sponsored by the Cleveland Botanical Garden. We welcome author Maureen Heffernan, who worked on the project, who wrote the story, and who is also the director of Public Programs for the Cleveland Botanical Garden, which has just subscribed to *Green Scene* for its 4,500 members. We welcome all our CBG readers and look forward to hearing from you about your gardening interests.

The second children's story, by PHS Publications staffer Lauri Brunton, is about some young people's gardening activities through PHS's Philadelphia Green programs. The third story is by librarian Art Wolk, a Philadelphia Flower Show two-time Grand Sweepstakes winner. Art developed a children's garden at the Winslow Township Branch Library in Camden County, which he manages, thus bringing together his two great loves — books and gardens. (Now if he could only fashion a movie script out of the whole thing he'd bring together his three great loves.)



Above: Third grader Daniel Clayton-Bey, expresses her appreciation for the new garden at Forest Hills Parkway Elementary School in Cleveland, Ohio, which was coordinated by Cleveland Botanical Garden with the cooperation of 28 teachers from across the city. This issue of *Green Scene* includes three stories about the value of horticulture in the lives of children. See Reading, Writing and Rototilling (p. 15); Finding the Heart in Wood (p. 19); and Planting the Seeds for Future Gardeners (p. 22).

Left: Paul Meyer, the F. Otto Haas director of Morris Arboretum, was one of five American plant explorers who travelled to a remote Chinese province to search for plants that would thrive in specific North American areas. Here Paul rests at Heavenly Lake in Chang Bai Shan.



photo supplied by Paul Meyer

Area Horticulturists Search for Hardy Plants in

 by Bill Stieg



4 *Paul Meyer and Jeff Lynch, who traveled to China with three other American horticulturists, find hair-raising adventures as well as hardy plants that can improve life in our cities and in our suburban gardens.*

Paul Meyer is talking about heroes. The van is bouncing along a dirt road through remote logging country in northeastern China near the North Korean border. It has been a long ride, full of the unexpected events he has learned to expect since he first came to China to collect plants 17 years ago.

He and four other American plant explorers have endured a flat tire, the constant dodge-'em of rural Chinese roads — close calls with bikes, mule carts, trucks, pedestrians, road equipment — and even an engine stall right in the middle of a river. They left America a week ago and still haven't set foot in the woods.

Meyer, the F. Otto Haas director of the Morris Arboretum of the University of Pennsylvania, is talking about perhaps the most famous plant explorer of all, E.H.

"Chinese" Wilson. The Englishman spent years in China from 1899–1911, bringing to Europe and the United States more than a thousand new plants, from the paperbark maple (*Acer griseum*) to the regal lily (*Lilium regale*). Chinese Wilson is a legend to modern horticulturists, for his writing and photography as well as his living legacy of plant introductions.

Wilson traveled by boat, beast, foot and even sedan chair — to impress villagers as a man of importance when he needed lodging. His leg was broken in a landslide on his final trip to China, and he used a camera tripod leg as a splint and made it back to Boston and the Arnold Arboretum, for whom he was collecting. He took many more trips around the world, but died in an auto accident in America when his car skidded on wet leaves.

"Live by the tree, die by the tree," quips Meyer, the group leader, as the van trundles along.

Now they are motoring down a straight stretch of hard-packed dirt road used mainly by trucks, bikes and villagers' carts. Up ahead in the opposing lane a speeding, fully loaded logging truck swings left to avoid a bike, then right to miss a Jeep.

One of the logs bounces loose from the front bed of the truck but remains lashed to the rear trailer. The log swings crazily away from the rig, into the opposite lane — the van's lane — and becomes a Bunyanesque battering ram.

It all happens too quickly for the van's driver, who brakes and steers as far to the right as possible. Meyer and his fellow Americans watch in horror as they realize the log is going to smash into their van,



photo supplied by Paul Meyer



photo by Bill Steeg

A log from an approaching logging truck tore off the door of the Americans' van. With seconds to spare, the horrified horticulturists saw the battering ram heading straight at them and ducked, narrowly missing a full-scale tragedy.

ing, at the mangled door. Then, by force of habit, they look at the log. It's about 40 feet long, 15 inches in diameter. Familiar bark, obviously genus *Tilia*. Clinging to the log are some leaves, heart-shaped and coarsely toothed.

"*Tilia mandshurica*," they conclude. It was a Manchurian linden that almost killed them.

Searching for plants for eastern North America

These men are happily pursuing their dream work, collecting seeds of promising plants in an exotic, yet horticulturally familiar, locale. They have come to this part of China because its flora closely resembles that of north-central and north-eastern North America. The forests skirting the Chang Bai Shan (Ever-White Mountain) are full of maples, oaks, birches, poplars and other familiar genera, but with several more species than in America — species that really get a horticulturist's sap running.

"The Asian flora is so attractive to plant explorers because the plants are pre-adapted to do well in eastern North America," says Peter Del Tredici, director of living collections at the Arnold Arboretum, and the group's resident wisecracker.

"Many of them once occupied large ranges, and now they may only grow in a small area, but they still have the genetic capability to prosper in areas that they no longer grow in naturally." Or in a whole new area, like North America.

Meyer gestures at the surrounding forest.

"If you know the flora of eastern North America, you can feel pretty comfortable walking through the forests of this part of China," he says. "There are so many

analogs of our North American species here. Where we have the paper birch, here we have a number of Manchurian birch species that are quite analagous.

"We have the American white pine, here's the Korean white pine. If we were to stand here and take away the rice fields and take away some of the architecture, and just look at these mountains, you might think you were in New England, because

The Chinese hosts warn the American horticulturists about increasingly desperate Korean bandits who have murdered at least six local Chinese in the past year, including two the day before yesterday. Nobody strays too far from the group, which is difficult for tree-lovers in a forest.

the overall composition and structure of the forest is so similar to what we have in the northeastern United States."

So here they are, hoping to collect seeds of trees and plants that might have a future in America, as ornamentals for suburban gardens, or as street trees for northern cities, or in parks, or on golf courses — anywhere a new kind of plant might be useful. They love trees with special visual appeal, like the red twigs and petioles of *Acer tschonoskii*, or the peeling bark and fall color of *Acer triflorum*.

But most of all, they like hardiness. "The reason we're so interested in Chang Bai Shan is it's the northern extreme for a lot of species found in the Korean peninsula," Del Tredici says. "They're going to be the hardest you're going to be able to find."

Jeff Lynch, Longwood Gardens nursery manager, and Paul Meyer, director of Morris Arboretum of University of Pennsylvania, collecting cuttings in Chang Bai Shan.

through the windshield. Someone yells "Get down!" as they all dive to their right and to the floor.

Bam! The collision is loud but brief. The van is still upright; cautiously, heads come up. There are still nine — heads, that is. But the van's door is gone.

The horticulturists turn to look at the logging rig, finally coming to a halt 100 yards down the road, the wayward log still extended menacingly.

Stuck to the end of the log, crumpled like foil on a baseball bat, is the missing van door.

Meyer and the others resume breathing. Slowly, they emerge from the van. The driver's leg is bruised, but otherwise everyone is OK. Meyer inspects the gaping hole where the door was ripped away.

Down the road, the men look, disbelief-

Dinner with horticulturists can be an education. Vegetables are picked at and identified. Spices are savored, and identified. Soups are dredged, and the ingredients identified. After English and Chinese, the most common language spoken is Latin. Beer flows freely. Life is good in the New China.

They're not just after winter hardiness, but drought tolerance, disease resistance, the kind of toughness that makes a tree useful and valuable.

"This has been an untapped area," says Kris Bachtell, director of collections and grounds at the Morton Arboretum outside of Chicago. "So the extra hardiness, the extra heat tolerance, might be there because of the location."

In most cases, these modern plant explorers are hoping to find seed, "fresh germ plasm" or genetic material, that can strengthen the existing stock of trees collected generations ago by people like Wilson.

Jeff Lynch, nursery manager of Longwood Gardens, is carrying a leaf the size of an extra-large pizza. It is the first day of collecting, and the group is at home in the woods. Del Tredici is fiddling with the global positioning satellite receiver, which will tell them exactly where they are and at what elevation, the kind of precise information that is invaluable to researchers.

Charles Tubesing, horticulturist at the Holden Arboretum near Cleveland, and Bachtell are stripping fruit off a plant and putting it in bags. Meyer is sitting down, field notebook open, filling it with information: location, habitat, slope, aspect, soil type; descriptions of leaves, bark, fruit, growing habit; the scientific name and what the locals call it.

The plant? Nothing special: *Philadelphus schrenkii*, a version of our familiar mock orange, which the Chinese call brittle shrub. Del Tredici calls out the longitude and latitude, Meyer writes it down.

Now Lynch's mega-leaf grabs everyone's attention. Tubesing, whose memory amazes his colleagues, recognizes it as *Astilboides*. The Chinese call it mountain lotus, and they prize it for food and medicine. It has been largely wiped out of unprotected lands. The team collects it, bagging the seed and clipping the huge leaves.

They work the forest methodically, finding plants on their target list, clipping off six small representative branches for pressing, drying and mounting in herbaria; then gathering as much seed as they can find. They don't remove entire plants.

On this first day, they are working near



Left to right: Zhao Shuqing, Wang Xianli and Cao Wei work with Paul Meyer to record information about the *Philadelphus schrenkii* they just collected.

the Yalu River. North Korea is literally a stone's throw away, the river is about 50 yards across at this point. But the Chinese hosts warn the Americans about increasingly desperate Korean bandits who have murdered at least six local Chinese in the past year, including two the day before yesterday. Nobody strays too far from the group, which is difficult for tree-lovers in a forest.

(On the other hand, this was probably the only group of Americans who could tramp around China at the North Korean border with cameras, binoculars and notebooks, and not get in trouble.)

They collect a *Corylus mandschurica*, An edible filbert tree the Chinese call needle-nut; *Crataegus maximowiczii*, a hawthorn whose haws will be sent through a blender to extract the seeds; and an *Abies nephrolepsis*, a cone-laden Manchurian fir grown for lumber. This fir is reputed to be especially heat tolerant.

Lunch is a simple picnic near the Yalu. The Americans tear off hunks of Chinese

bread and smear "cao mei jiang" — strawberry jam — on it with their jackknives. There are hard-boiled eggs, apples, pears, and bottles of water, Coke and Sprite. Tubesing, who slipped in a stream, hangs his socks out to dry.

Somewhere, a tree is seeding; cotton floats over the heads of the five Americans and their Chinese guides. They are eating in the shade of a handsome willow tree, upright and sturdy, but everyone knows willows seed in the spring. On the other hand, they're not in America anymore.

Sure enough, it's a neighboring willow releasing the seed, which they promptly collect. They will see the same tree, whose species remained a mystery, all up and down the Yalu, but only that single tree appeared to be seeding.*

"Great," says Del Tredici, "we collected the lone mutant fall-seeder."

*Later, using the herbarium specimens, Chinese botanist Dr. Cao Wei determined this tree to be a willow relative, *Chosenia arbutifolia*.



Left: Jeff Lynch (with pole) and Paul Meyer collect *Astilboides* fruit along the Yalu River. **Right:** Jeff Lynch climbs to collect *Chosenia arbutifolia* (a rare willow relative). Plunging into the woods, climbing trees and rocks and not wandering too close to the Korean border were all part of a day's work for the team of explorers.

Farther down the road, they pass North Korean soldiers sitting at a campfire on the opposite bank; a Korean woman washing clothes; a Korean peasant and his cow.

They find a big patch of mountain lotus, many of them laden with fruit, and Meyer and Lynch scramble up a slope to snip the stalks.

They end the day on a mountain road, 300 feet above the Yalu, the sun slipping behind a ridge, a peaceful Korean village far below, smoke rising from kitchens whose roofs are draped with gourd vines. The pastoral scene is breathtaking, but Bachtell sees something just as moving: *Acer barbinerve*, a small, attractive maple he's been hoping to find. He pulls out his \$42, Swiss-made Felco hand shears and goes to work.

Preparing the collections for home

Back at their hotel in the dreary logging town of Chang Bai, the collectors begin the next phase of their work. Under the bemused gaze of hotel maids who stand by

with tea, the Americans spread the day's branches and seeds across the floor of a wide passageway. (They'll clean up this forest litter when they're finished.)

They remove the herbarium specimens from plastic bags and place them between folded newsprint, blotter paper and cardboard, until the stack is about knee-high. Then it is pressed down, fastened in a frame and set aside to dry for a few days. Back home, these specimens will be mounted on acid-free paper for the herbaria of the various U.S. and Chinese arboreta, there to remain for centuries, they hope.

Likewise, seeds are spread out to dry. Some fleshy fruits will be carefully sent through a modified blender to separate the pulp from the seed.

Then it's a quick retreat to their rooms — the hot water is on for only a couple of hours each night — and then they launch another expedition, to find a restaurant.

Dinner with horticulturists can be an education. Vegetables are picked at the identified. Spices are savored, and identi-

fied. Soups are dredged, and the ingredients identified. After English and Chinese, the most common language spoken is Latin. Beer flows freely. Life is good in the New China.

Plant explorers visited China regularly in the late 1800s and the early part of this century, and their legacy grows across America: magnolias, rhododendrons, forsythias, peonies, hostas, daylilies, viburnums, and numerous species of maple, holly, juniper and oak, to name just a few.

But history — war with Japan, revolution and the communist regime — kept horticulturists out of China for nearly half a century. Now they are coming back with increasing frequency, thrilled by the prospect of finding plants that could broaden the palette of landscape architects, nursery operators and gardeners back home.

Toward this end, the North American China Plant Exploration Consortium (NACPEC) was formed in 1990 to organize regular trips and systematic collections. The plant explorers are motivated by a



Charles Tubesing, horticulturist from Holden Arboretum in Kirtland, Ohio, enlists Kris Bachtell, director of Collections and Grounds at the Morton Arboretum outside of Chicago, and the Chinese team to help pull down an *Acer tschonoskii* var. *rubripes*, a maple on the group's target list. The seed is too high in the tree and the tree too flimsy to climb so the Chinese suggested they cut a stem.

sense of adventure and history, to be sure, but scientific, environmental and economic considerations loom larger.

They are obsessed with diversity, diversity within species and diversity as an overall goal in horticulture. They are haunted by the near wipeout of the American elm to dutch elm disease. They want flowering shrubs that can stand winters near Lake Erie; they want urban trees of such variety that no single disease, pest or stressful condition will leave streets bare.

8 "There are relatively few trees that do well in cities," Meyer says. "And we're interested in broadening that palette, so that when an insect or disease problem comes along, you're not putting all your eggs in one basket. We want to avoid monoculture."

Urban trees must be tough, and pollution is not the main threat.

"It's not nearly as important as what's going on beneath the ground," Meyer says. "It's the below-ground conditions that are really the limiting factors: compacted soil, poorly drained soil, low oxygen, and simply not having enough soil volume. Generally speaking, cities are lands of extremes. When it's wet it's wetter, when it's dry it's drier, when it's hot it's hotter, when it's cold it's windier and colder.

"So overall, the city is an extreme and stressful environment. In the wild, we can go to habitats that in some ways mimic these urban environments, such as a flood

plain. Sometimes we'll go to the sea coast because you'll get plants tolerant of intense sunlight, wind, drought and salt."

Meyer, 45, is tall and blond, two physical characteristics especially notable in China. He made his first trip to Asia in 1979, going to Korea and Taiwan, and made his first trip to China in 1981, not long after the country reopened to Americans. He has since made seven more trips to China, including tours organized by the Morris Arboretum, and has gone five times to Korea.

Plant collection is important to him on several levels. He remembers giving a talk about plant exploring in China about 15 years ago and getting a check for \$125, a precious sum at the time. As he walked out of the room he saw on a bookseller's table *China: Mother of Gardens*, by E.H. Wilson.

"A signed copy!" Meyer recalls. "And the price of it was just a little bit more than what I'd just been paid for the lecture. So I said, OK, I'm gonna do it. . . . With each trip that book becomes more exciting and more valuable to me."

Meyer, who grew up near Cincinnati, Ohio, has strong childhood memories of gardening: his parents' flowers, the fruit trees on his grandparents' acre and a half, their big vegetable garden; at age six, his very own tomato plant that produced ripe fruit before anyone else's.

"It's in my blood, and what it points out to me as an educator is how important it is

to get that early connection," he says. "Whether it's a gardening connection, or some sort of connection with nature, for kids at an early age. So share your garden with your kids."

He's equally passionate about the importance of cooperation among horticulturists and botanists around the world.

"Our group is interested in trees and shrubs," he says. "But take the broader view and think of the flow of plants throughout the world in general. We're looking out the windows here and seeing, for days, thousands of acres of corn. Corn is a plant from North America. We're also seeing soybeans, and that's a crop from China, which is number two or three in economic importance in North America.

"Rice — the raw material is Asian, but it primarily went to the United States for its education. And everything you see here are hybrid strains of rice, which were bred in the United States and shared throughout the world. That's the Green Revolution. Everyone was predicting mass starvation. Same with corn; these are all hybrid strains of corn, much of which was developed in the U.S."

The next morning, the American horticulturists are awake early. Outside, a fishmonger bangs cymbals and a sidewalk butcher blowtorches the hair off a dog carcass — much of the population here is Korean.

Rice — the raw material is Asian, but it primarily went to the United States for its education. And everything you see here are hybrid strains of rice, which were bred in the United States and shared throughout the world. That's the Green Revolution.

This day, the Chinese guides take them up a side valley, down a bouncy track that seems uninteresting. But then the van stops.

"*Tripterygium*, and no nonsense!" Bachtell calls out. "*Tripterygium* at 5 o'clock!"

Del Tredici smiles and says, "Good eyes."

The two men head straight to a viny shrub growing atop a lilac and start clipping specimens.

"*Tripterygium regelii*," Del Tredici says excitedly. He has a strong interest in the medicinal properties of plants. He's perhaps the world's foremost authority on ginkgo, a leaf extract that's a big seller in Europe (but not, ironically, in China).

Tripterygium is another story. "In traditional Chinese medicine, an extraction of the root bark was used externally for treating skin blotch. It made it go away," he says.

"In the late '70s and early '80s some of the patients came back complaining of other side effects of the medicine. They subsequently found out the men had low sperm count, reduced by as much as 90 percent. There's been a whole lot of interest since then, investigating the plant for its potential as a male contraceptive."

He says its effects are "fully reversible."

The rest of the day yields 16 collections, including five maples, a mountain ash, a lilac and a linden (not the killer species). They gasp at the size and dark green color of a Korean arborvitae, and munch on wild kiwi fruit. That night, they press their specimens, eat their dinner, drink their beer and celebrate a Friday night in Chang Bai with some sidewalk billiards, much to the amusement of the locals.

Over the next two weeks, the men will comb the mountainsides, spending much of the time on the northeast slope of Chang Bai Shan, where they will walk among protected virgin forests on thick carpets of moss: Korean pine, Mongolian oak, needle fir, birch, poplar and lindens that may have started growing shortly after the mountain last erupted 400 years ago. They will celebrate Bachtell's 40th birthday on the night of Chinese Moon Festival, the high country bathed in moonlight.

Next steps

And they will come home with 143 the green scene / march 1998

collections of 96 species, about two-thirds of those woody plants. Then the real work begins.

If all goes well, the seeds will sprout, become pampered seedlings and eventually be moved outside, watched closely at every step. Some plants may be worthwhile as they are, "Off nature's shelf," Meyer says. With some species, individual plants with desirable traits will be selected from hundreds of seedlings and asexually propagated.

"And the highest level, the most intense and long-term level, is an active breeding program," Meyer says. "That's long-term, very expensive, and you focus on a very few plants to do that."

Woody plants take years to establish and can take decades to get on the market. The work, Del Tredici says, requires a "major league act of faith that our institutions will be here in 30 years, and that somebody will care about it."

Woody plant propagation is not for those seeking instant gratification, Meyer observes.

"It's important to be planning how we conserve our resources. Not just from day to day, or five years from now or 10 years from now, but for generations from now."

Del Tredici and Bachtell stop in Beijing on the way home, meeting with officials to discuss a future NACPEC trip. The ginkgos in the capital's diplomatic district are showing the slightest golden tinge. In a restaurant, Del Tredici skillfully wields his chopsticks and talks about the importance of the plant explorers' work — and defends it against what he considers misunderstandings.

"Urban areas are not natural environments," he is saying, "so to talk about native flora of Boston or Philadelphia is ludicrous. There is no native flora of Philadelphia — it's an artificial environment. All you want are plants that can tolerate those stressful conditions. We're looking for plants that not only can survive urban conditions, but do well in them."

"Not only are new plants being introduced all the time, but new insects and diseases are being brought in inadvertently. So as quickly as plants are introduced, the problems are coming in that are wiping out old species."

He mentions the ongoing assault on Canadian hemlock by an insect introduced

from Asia 20 years ago.

"You can't just rest on your laurels and say, 'Oh, we've solved all our problems, these are the plants that do best in urban conditions."

"The reason for bringing in new material is so that before disaster strikes, we have a good idea of the palette of plants that are pre-adapted."

"Like it or not," Del Tredici says, "We're part of the urban ecosystem and we have a responsibility to care for it and maintain it. And that doesn't mean leaving it alone. It means making some very difficult decisions and it means taking an aggressive, proactive stand when it comes to environmental management."

To be sure, he acknowledges, plant explorers have made mistakes. Like the government-sponsored introduction of kudzu for erosion control, which got out of hand.

As appealing as the concept of planting only natives is, he continues, it's unrealistic at the dawn of the 21st century. Americans have been deluded by "the Myth of Wilderness. It's a total myth. Or the Natural Garden. A garden, by definition, is not natural, it's artificial. There's no such thing as a natural garden."

"Let's own up to the fact that these are artificial, human-dominated landscapes and let's find the best plants for those environments, period. It doesn't matter if they come from Asia or North America."

Our job, Del Tredici says, "is to prod the industry into trying some new stuff. And you do that by collecting and evaluating large quantities of seed from really good locations that have promise."

To bring these plants home, today's heroic plant explorers will endure plenty, as this group did: four flat tires, a stalled van in the middle of a river, a fire that burned down their guesthouse kitchen and exploring along dangerous borders. And even the occasional killer linden. And they keep going back.

Bill Stieg is a freelance writer living in Beijing, China, with his wife, Jennifer Lin, correspondent for the *Philadelphia Inquirer*, and their two children. Stieg, a former reporter for the Associated Press in Philadelphia and New York, has written for many publications, including the *Philadelphia Inquirer*, *Boston Globe* and *Sports Illustrated*.

Add Promising Perennials to

Six hundred lovers came to a perennials paradise. The people who have combined their resources for 14 years to make us perennial passionates happy, gave us another top-notch day at the Perennials for the Landscape Industries Conference held in October at Scott Arboretum of Swarthmore College. One of my favorite parts of the Conference is the Promising Plant Forum where you get cutting-edge lists of plants to try. Six hundred folks stayed for the Forum, held at the close of the day to hear some of the best professional and amateur perennial gardeners talk about new plants or plants they believe are underused. I made a big list of the plants I shouldn't be without. Here's a summary of the experts, and plants to help you with your lists.

photo by Jim R. Adams

Jim Adams is curator of the **National Herb Garden** at the **National Arboretum** in Washington, D.C. His selections can add new flavor to your garden.

Aralia racemosa arises with great drama in spring with red asparagus-like stems followed by great compound leaves that reach 5-6 ft. Clusters of white flowers welcome summer and are followed by red berries in August. The berries will ripen over a long period of time and last until the first hard frost. Either sun or part shade and fertile soil make a perfect home.

Dicentra scandens, a delightful combination of small, dainty succulent foliage and dangling bright yellow flowers. Climbing by tendrils, this vine has an ethereal quality

Sponsors for the Perennials for the Landscape Industries Conference

Longwood Gardens, Inc.
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Pennsylvania Nurseryman's
Association, Chapter E-1
The Scott Arboretum of
Swarthmore College

Dicentra scandens, a vine that enhances whatever you wish it to climb on. Golden lockets, which are really the flowers, dangle from delicate succulent stems to attract the eye.





Yucca filamentosa "Golden Sword": the upright sword-like foliage shows off a great gold and green color. It's particularly welcome when winter is overly dreary.

and needs a little protection. A fence to climb will create some protection, and you should be sure to mulch for winter. Afternoon shade will ensure flowers from mid-June until frost.

Parthenium integrifolium has cabbage-like, basal foliage in early spring, followed by tall clusters of white flowers in May that continue all summer. The flowers age elegantly, turning light grey to brown, and provide good winter interest. A native from Georgia to the midwest, it thrives in full sun and fertile soil and reaches 4 ft. A tough plant, it can survive in heavy clay soil but then only grows to about 2 ft.

Richard Bitner is a physician by profession; his real joy is his work as teaching assistant at Longwood Gardens in Kennett Square, Pa., and instructor at the Arboretum of the Barnes Foundation.

Amsonia hubrechtii is not as often used as *A. tabernaemontana*, which is too bad. The

narrow, feathery light green foliage of this species is free of disease and insects and provides a spectacle of vibrant gold and orange when fall arrives. This native requires low maintenance; full sun and well-drained soil are perfect. Shade causes the foliage to flop.

Yucca filamentosa 'Golden Sword' has bright yellow edges on sword-like leaves that are 2-3 ft. and is particularly striking when winter arrives and they have kept their color. Giant stalks of flowers, standing at 6 ft., are showy in summer but best cut off when they fade. A tough plant, yuccas prefer good drainage, will withstand drought and are not fussy about soil.

Sedum kamschaticum 'Weihenstephaner Gold', unaffected by drought, quickly creates a tangled mass in any well-drained soil. Spring brings loads of golden-yellow flowers in either sun or part shade and, come fall, the foliage turns a glorious bronze, which holds throughout the winter.

photo by Shelley Dillard



Allium thunbergii is a welcome sight come August with beautiful round purple flowers showing up just when everything seems bleak. This plant will especially look great with a silver companion.

Shelley Dillard is the propagator at the **Morris Arboretum of the University of Pennsylvania** where she has the opportunity to grow many good plants including the two below.

Geranium oxonianum 'Thurstonianum' has dainty straplike purple flowers with white throats. Drought and neglect will not faze this child of *G. endressii* and *G. versicolor* and come August, the foliage will still look great in either full sun or part shade. This plant did not inherit the rogue characteristics of *G. versicolor* and only spreads a little each year.

Allium thunbergii is an underused perennial although it arrived in our country more than 10 years ago. A strong bloomer starting in August, its round purple flowers stand at 12 in. and are perfect paired with silver or a rebloomer like *Hemerocallis* 'Happy Returns'. A grasslike tuft for foliage always keeps up appearances and this is on the easy-to-grow plant list.



From yummy red berries that arise when the foliage is dormant, to its later large variegated leaves and a green spathe flower, *Arum italicum* 'Marmoratum' is a show stopper.



Giant white crinkled petals with amazing yellow stamens characterize *Paeonia lactiflora* 'Krinkled White'. Better yet are the stems that hold up the weight of these flowers, and its long bloom period.

Beverly Fitts is a garden designer from Merion, Pa., who also chairs the Hardy Plant Society. Her selections include both new and not often used plants.

Euphorbia amygdaloides 'Rubra' is a spurge with good purple-red foliage topped by chartreuse flowers in spring. The combination is excellent. Bushy and compact, this Zone 7 plant has good-looking seed capsules and will seed mildly. Dry conditions and good air circulation are the best conditions and come fall, cooler temperatures will increase the vibrancy of the foliage color.

Arum italicum 'Marmoratum' has unusual spathe flowers but best yet are large (up to one ft.) bold leaves with creamy-white variegation. The plant's cycle for growth and dormancy actually begins in October when new foliage arises. New leaves continue to unfurl come spring, covering the foliage tattered by winter. Big green spathe flowers appear in June followed by berries, and by August 1, the foliage has disappeared leaving a beautiful stand of berries.

Campanula takesimana 'Elizabeth' is in the midst of one of those nomenclature debates and can be found as *C. punctata*. *C. 'Elizabeth'* is new on the market, a selection from England with 12-in. basal foliage and beautiful deep rose-pink tubular flowers speckled pink on the inside and rising to 2 ft. in early summer. Beware, rambunctious best describes its personality and planting in compacted soils will allow you to control it.

Carex siderosticha 'Variegata' has the most wonderful foliage, which looks like something between a hosta and a bamboo. *Carex* typically have narrow leaves but these are broader, still linear and with excellent creamy-white margins and white striations. Downright elegant in a woodland or beneath a shrub, light shade to full sun and dry soil are its preference.

Leslie Grayson is the owner of **Grayson Gardens** in Royersford, Pa., a specialty nursery where you can find several treasures including the ones she has suggested here.

Paeonia lactiflora 'Krinkled White' has single white crinkled petals and sturdy stems that prevent it from flopping under the weight of an outrageous abundance of giant flowers. A 1928 hybrid still popular today, it blooms early (around Memorial Day) and is still going strong when the late

Promising Perennials

bloomers begin. Why? This selection has secondary buds that open and are as large as the terminal buds. Most peonies have secondary buds that show lots of promise but shrivel after the terminal buds are finished. One more thing, the foliage stays clean.

Geranium ×riversleianum 'Mavis Simpson' is a selection with the same parentage (*G. endressii* × *G. traversii*) as the better known *G.* 'Russell Pritchard'. The foliage emerges grey-green and in part sun it will bloom all summer. Clear light pink flowers (*G.* 'Russell Pritchard' is magenta) emerge from the center of the plant and fall to the side creating a petticoat of flowers while new ones continue to arise from the center.

Geranium ×dilys is an exciting new introduction from England with nonstop bright purple flowers; this selection will bloom from spring until frost. A trailing selection, it looks best dripping over a wall and can be cut back at any time without affecting its appearance.

Geranium wlassovianum has pubescent leaves and velvety stems that support lavender flowers with dark purple veins. The flowers arise from the center of the 12-in. mound of foliage come summer and continue to do so until fall. Cool weather

brings gorgeous orange, yellow and burning bush red foliage. It also fits on the low-maintenance list, thrives in average soil either dry or wet, and in sun or shade.

Jeff Lynch is nursery manager at Longwood Gardens in Kennett Square, Pa., where he evaluates many promising plants, two of which we should try.

Amsonia ciliata var. *filifera* is a southern U.S. native, hardy to Zone 7. Pale blue flowers begin at the end of May and continue into June but are sporadic and not the real reason one would grow this plant. It's the fine green prostrate foliage best shown off cascading over a wall or rock; it reaches only 3 in. in height but spreads to 5 ft. This plant also needs no dividing to thrive.

Polygonum polymorphum is also listed as *Persicaria polymorphum*. This is a worthwhile plant regardless of nomenclature headaches. Polygonums are known to be a bit invasive but this is a clump-forming species and a fast grower, reaching 5-6 ft. Showy white flowers are in abundance from June into August, require no dead-heading and no staking. What more can you want. How about seed heads that hold most of the winter, easy to propagate and drought resistance.

J.P. Malocsay is a freelance writer, editor and gardener who lives in Landenberg, Pa. He offers us plants that stretch our hardiness and offer terrific color opportunities.

Lysimachia nummularia 'Aurea' has great lime green to yellowish foliage that glows, especially in shady areas. This creeping groundcover looks its best cascading out of a container or spilling over the ground at the edge of a bed. This plant produces roots along its length and will roll around the garden at the speed of lightning so it's best to plant it in a container.

Carex comans 'Bronze Form' has 1-2 ft. rich bronze-red and tan foliage and long rusty inflorescences. Placed in the path of the morning or evening sun the light will make the color sing. Moisture is essential; leave the old foliage to be combed out by the birds in spring. This plant responds too slowly if pruned.

Carex buchananii is another tender carex, Zone 7, with a more upright habit and a tendency to curl at the ends of its leaves. The bronze foliage makes it one of those great companion plants. It will enhance many other plants and also looks great in a container.

continued



Polygonum polymorphum, one of those plants that will soon be a hot item. Great white plumes, not unlike a large rendition of astilbe, have merit by themselves. You'll get flowers most of the summer and never mind that they stand atop a 5- to 6-ft. plant.



Carex buchananii has an upright habit, a real asset in a container where the feathery bronze foliage will enhance almost any other plant you select.

photo by J.P. Malocsay

Promising Perennials



photo by Patricia Schrieber

The fantastic blue of *Gentiana acaulis* is so stunning it's worth growing this tiny plant just for the flowers. To be sure to easily ogle the flowers, put them in a trough elevated closer to eye level.

Patricia Schrieber, the Outreach manager at the **Pennsylvania Horticultural Society** in Philadelphia, offered selections best for rock gardens, troughs or the edge of a border.

Armeria juniperifolia has evergreen, needle-like leaves and small pale lilac-pink flowers in spring that will dry and hold for some time. The 3-in. foliage creates a mound some 6-in. across with foliage that continues to look great throughout the whole season.

Phlox bifida has 6- to 8-in. foliage that spreads to some 3 ft. and is covered with an abundance of lavender-blue snowflake-like flowers. A native to the midwest and very hardy, to Zone 4, the foliage resents the heat of summer although its spring performance goes unaffected.

Gentiana acaulis is worth it just for the breathtaking blue flowers; trumpet-like and only 2-in. long, they look like stars when you peer into them. The foliage stands at a wee 1 in. but is evergreen and reaches 1 ft. across at maturity.

Sources

Bluestone Perennials
7211 Middle Ridge
Madison, OH 44057
(800) 852-5243
Free catalog

Kurt Bluemel
2740 Greene Lane
Baldwin, MD 21013
(800) 248-7584
Catalog \$3

Carroll Gardens, Inc.
444 E. Main St.
Westminster, MD 21157
(800) 638-6334
Catalog \$3

Grayson Gardens
1044 Second Avenue
Royersford, PA 19468
(610) 948-3661

Heronswood Nursery, Ltd.
7530 N.E. 288th St.
Kingston, WA 98346
(360) 297-4172
Catalog \$4

McClure & Zimmerman
Box 368
Friesland, WI 53935
(414) 326-4220
Free catalog

Pendragon Perennials
225 Green St.
Emmaus, PA 18049
(610) 965-0102
Free list

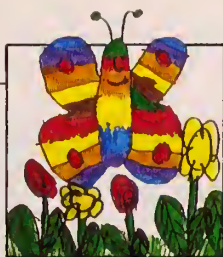
Plant Delights Nursery, Inc.
9241 Sauls Road
Raleigh, NC 27603
(919) 772-4794
Catalog — 10 stamps or a box of chocolates

Prairie Nursery
P.O. Box 306
Westfield, WI 53964
(608) 296-3679
Catalog \$3

Siskiyou Rare Plant Nursery
2825 Cummings Rd.
Medford, OR 97501
(541) 772-6846
Catalog \$3

Water Ways Nursery
13015 Milltown Road
Lovettsville, VA 20180
(540) 822-5994
Catalog \$2.50

Cheryl Lee Monroe is a frequent contributor to *Green Scene*. She resides with her garden and family in Myersville, Maryland.



Reading, Writing and Rototilling



by Maureen Heffernan

Under the aegis of Cleveland Botanical Garden, 28 teachers from all over Cleveland met to create a garden at an elementary school. They took their experience back to their own schools to enroll other teachers, parents and interested neighbors to create gardens for the children to enjoy and to learn from.

The Monday morning school bells scatter birds gathered on a vinepole and birdbath into a sudden flight to nearby oak and pine trees. Butterfly bushes gently bob up and down mimicing the motion of the monarch butterflies fluttering over them. A mulberry tree shelters a hideout under its leafy drape, while tiny lettuce seedlings peek through a nearby vegetable bed.

The students at Forest Hills Parkway Elementary School in Cleveland, Ohio, were surprised last fall when they returned to classes and discovered flower, herb, and vegetable beds, a berry patch, vines, compost piles, cold frame, and a storybook-type garden arbor installed in their school's two courtyards.

Used to two neglected courtyard spaces, the returning students delighted in the colorful, cultivated gardens filled with opportunities for hands-on learning, discovery, and quiet observation.

The Forest Hills Parkway Elementary School garden was created by 28 teachers

from 20 schools throughout Northeast Ohio, and two horticultural educators from the Disney Institute in Orlando, Florida, who participated in a unique five-day, "hands-on, gloves-on" Teacher Institute sponsored by Cleveland Botanical Garden August 4-8, 1997.

The idea for the Institute arose from a 1996 Cleveland Botanical Garden national symposium designed to show how to build and use school gardens. "School Gardens: Education in Bloom" attracted 275 educators who, after hearing inspiring presentations, wanted to start digging, planting, and building compost bins, birdhouses, and the like.

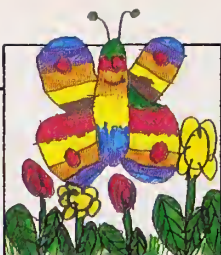
Cleveland Botanical Garden offered to provide some immediate horticultural gratification and to harvest that wonderful energy by building a school garden at the same time. In the spirit of an Amish barn-raising, where a community comes together to build, the idea for a teacher garden-raising institute was born.

Children, from Alaska to Florida, are

Bertie Morehead, a third grade teacher from Forest Hills Parkway Elementary School, brought Ashley Russ to the teacher institute one afternoon to help install the school garden.

photo by Janet Century





photos by Janet Century



Top left: Maureen Heffernan, Cleveland Botanical Garden's director of Public Programs (far left), shows teachers how to mix cement to install a vine pole. The 8-ft. wooden pole adds some vertical and flowering interest to the garden site featuring edible plants and will serve as a sturdy "ladder" for flowering vines such as *Clematis paniculata* (sweet autumn clematis). In winter, students can make bird feeders to hang from the pole and can watch from their classroom windows the birds gather there. **Top right:** Always popular with children, Native American lore and pumpkins. Fabienne Audette, a CBG intern, demonstrated how to build a tepee from tree branches. Seeds of mini-pumpkins and gourds will be planted at the base of the tepee next summer. Children will harvest the crops in the fall when they return to school. **Bottom:** Teachers take a break while creating the garden in the rustic arbor built for the wildlife habitat courtyard at the school. The arbor doubles as an outdoor classroom site and bird blind. Made from small tree trunks and wood pieces, the arbor is a delightful, shady place to observe the colorful plantings, squirrels, and butterflies.



Based on conversations with teachers and students, James McKnight designed a wildlife habitat filled with native flowers, trees, and shrubs that attract and sustain wildlife — especially birds and butterflies for one courtyard, and a “farmer’s market garden” of vegetables, herbs, a compost pile, propagation cold frame, and berry patch in the other.

also enjoying new gardens at their schools through a much-needed school garden revival nationwide. School gardening programs, once a common aspect of education in the U.S., had sadly gone out of fashion, especially in the 1960s and '70s, due to shifting educational priorities and demographic changes.

The school garden revival enables more and more children to experience nature directly; the gardens provide practical and exciting opportunities for enriching the entire curriculum, especially science, environmental and nutritional education.

Gardens and other landscaping projects can transform the often bleak and barren-looking schoolgrounds that so often send a message to kids that they are not valued. How could they be when, for many urban and suburban children, the place where they spend much of their young, impressionable lives is an unimaginative, biological wasteland of concrete or concrete-like turf often without anything as basic as shade or a place to sit. Beautifying and humanizing schoolgrounds with gardens and other plantings give children and teachers a sense that they are valued.

The American Horticultural Society, the American Community Gardening Association, The National Wildlife Federation, botanical gardens, and the California Department of Agriculture are all urging educators to create school gardens to teach children about plants, soils, conservation, recycling, how food is produced, and nutrition. And gardening programs can also help instill children with such values as responsibility, hard work, patience, and a respect and empathy for nature.

In the various school gardening programs that I have been involved with over the years, the evident delight and pride many children show towards their plantings, brings to mind the theory that a butterfly flapping its wings can cause a

monsoon halfway around the world. I like to think that an effective school garden program can precipitate a positive monsoon effect of its own in the life of a child and quality of a school.

CBG's first job in planning our institute was to locate a school that not only wanted a garden, but had a principal and staff that would be committed to maintaining it. Forest Hills Parkway Elementary School in Cleveland was selected because principal Dr. Linda Hardwick, and a group of teachers, impressed us with their sincere desire to improve their school. Fifth grade teacher Bertie Moorhead told us that she had always wanted to do something with those courtyards, but never knew where to start. “They have so much potential,” she added.

We agreed. The school's two large inner courtyards, located on either end of the school, were like two dusty Hope diamonds. All of the school's classrooms look into the courtyards, which meant children would see the new gardens all day long and through seasonal changes. Most of the classrooms have doors that lead directly on to the courtyard, which meant it would be easy for teachers to conduct a class or have kids work in the garden. The courtyards had some nice, but overgrown, oak and pine trees and fairly good soils. Sheltered from cold winds (and vandals) the courtyards had a warm microclimate perfect for extending the growing season in the spring and fall.

Funding for the garden

A grant from The Trust for Public Land, which helps improve public parkland near the school, helped fund the new garden.

James McKnight, a landscape architect, was hired to create garden designs for the courtyards. Based on conversations with teachers and students, he designed a wildlife habitat filled with native flowers, trees, and shrubs that attract and sustain wildlife — especially birds and butterflies for one courtyard, and a “farmer’s market garden” of vegetables, herbs, a compost pile, propagation cold frame and berry patch in the other.

With a school, money and design in hand, we planned a five-day institute for teachers from the region. Lorna McDevitt, CBG's Youth Education coordinator, led the first two days with plant and garden-based curricula. Participants also built several garden structures including a cold frame, wormbox, bird house, and light

The Children Write . . .

Dear Cleveland Botanical Garden:

Thank you for making our school look good. It is looking like it should. I am thanking you for what you done. I am feeling like number one.

Love, Chaya

Dear Garden People:

“Thank you for the flowers. Thank you very much, oh thank you for the garden.”

From your friend, D’Andre

Dear Botanical Gardeners:

“When I came to school this year, I was shocked. I learned the garden was for us. I like being in the garden and learning about butterflies.”

Your friend, Lincoln

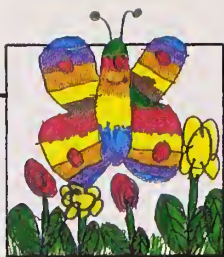
stand, to use in their classrooms.

A full day of hands-on gardening tasks was planned for the third and fourth day where the teachers would do everything needed to start and maintain a garden. Working with CBG education staff, they removed turf, tested soil pH, amended soil, and applied fertilizer. They planted a variety of annuals, perennials, herbs, vines, shrubs, and trees (see box).

“My students would love a butterfly garden like this,” a teacher said surveying the layout. “Not just students,” added another *sotto voce*. “Teachers need a garden to play in when it gets too crazy.”

Teachers enjoyed watching a rustic garden arbor being built by MJM Landscaping of Cleveland Heights. Specially designed for a site in the wildlife courtyard, it doubles as an outdoor classroom or gathering site and bird blind from which to observe birds in the nearby trees and birdbath. Planted with honeysuckle (*Lonicera sempervirens*), trumpet vine (*Campsis radicans*) and virginia creeper (*Parthenocissus quinquefolia*), it has since become the most popular part of the new garden for students and teachers.

In the afternoons, teachers had the chance to work with landscape architect McKnight to draw up garden plans for their own



school sites that would help them get started once back at their own schools.

To finish in two days required substantial prep work beginning weeks before the teachers arrived. (The fact that 28 people working two full days can't complete a garden project indicates how much help a school needs in starting a successful garden project.)

Fabienne Audette, a CBG education intern with a master's degree in horticulture, coordinated the prep and installation work. She recruited CBG horticulture staff, professional arborists, carpenters, and volunteers, and thanks to her thorough work — pruning back overgrown trees, removing turf, weeding, edging, and amending soil — the site was ready to become a garden in two days once the teachers arrived. After two days of steady work, two beautiful gardens came to life.

According to Fabienne, "The most important work we did for the garden project was to prepare properly the soil in the new garden beds. It's critical to test the soil, amend it, and to improve its fertility and structure. Also pruning back the overgrown trees really opened up the area to more space and light."

On the last day of the institute, we asked the teachers to share the plans they had worked on with the landscape architect. Every teacher said they felt confident enough to make their own plan a reality by starting off small, and recruiting other interested teachers, parents, and community volunteers. We plan a follow-up survey of all the participants to determine how many garden projects started as a result of their Institute experience.

How fares the Forest Hills' garden project? CBG Education staff continues to oversee the garden project and reports that the 5th grade students has been designated the garden leaders. They train younger students to help plant, weed, water, and compost. While some still call the soil "nasty dirt," others are greatly enjoying themselves.

One 5th grader wrote to us, "Thank you for making me garden. I am having so much fun!"

This spring, the kids will have even more fun as they sow lettuce, radish, spinach, corn, carrots, peppers, collards, sunflowers,

parsley, basil and peanuts in their market garden courtyard. And when they return in the fall, they will be "shocked" and amazed at what has happened over the summer.

We hope our Teacher Institute Project inspires other botanical gardens and horticultural organizations to train teachers to build and use school gardens for school-ground beautification, curriculum enrichment, and a means for children's personal growth.

Plants for the Garden

Anise hyssop *Agastache* 'Blue Bonnet'; sweet autumn clematis *Clematis paniculata*; flowering dogwood *Cornus florida*; *Lantana camara*; bleeding heart *Dicentra spectabilis*; cardinal flower *Lobelia cardinalis*; a fantastic weeping mulberry *Morus alba* 'Chaparral' — a male cultivar, which produces no messy fruits; staghorn sumac *Rhus typhina*; rugosa rose *Rosa rugosa*; rosemary *Rosmarinus officinalis*; thyme *Thymus vulgaris*; and viburnum *Viburnum carlesii*.

They sowed seeds — cosmos *Cosmos bipinnatus*; globe amaranth *Gomphrena globosa*; heliotrope *Heliotropium arborescens*; lettuce 'Tom Thumb' and more. They pruned, watered, mulched, learned to sharpen garden tools, build a compost pile, and install a vine pole and tepee.

They helped lay out and plant a meadow and butterfly garden beds of common yarrow *Achillea millefolium*; butterfly weed *Asclepias tuberosa*; New England asters *Aster novae-angliae*; butterfly bushes *Buddleia davidii*; purple coneflower *Echinacea purpurea*; joe-pye weed *Eupatorium purpureum*; gay-feather *Liatris spicata*; beebalm *Monarda didyma* 'Mahogany'; black-eyed susan *Rudbeckia fulgida* 'Goldsturm'; and other native species that not only attract birds and butterflies, but have blooms in the spring, late summer or fall, that students can enjoy as well as the wildlife.

Maureen Heffernan is the director of the public programs at Cleveland Botanical Garden. She is also a garden writer whose books include *Burpee Complete Gardener* and *Burpee Seed Starter*. She lives in Shaker Heights, Ohio.

Organize School Planting Projects

The next time you pass by barren-looking school grounds, imagine a shady grove of trees where children could gather. Imagine a colorful flower bed at the entrance of a school that children would pass everyday, or kids looking out their classroom window at a beautiful meadow garden or daffodil bed.

Teachers and schools need your help to make these scenes come to life. Consider helping to organize planting projects for a local school. Listed below are some organizations to contact for information about school gardening projects.

Information Resources

American Community Gardening Association
100 N. 20th Street, 5th Floor
Philadelphia, PA 19103-1495
(215) 988-8846
e-mail: sallymcc@libertynet.org

California's "A Garden in Every School Program"
Deborah Tamannaie
California Department of Education
560 J Street, Suite 270
Sacramento, CA 95814
(916) 322-4792
e-mail: dtamanna@cde.ca.gov

The National Gardening Association
180 Flynn Street
Burlington, VT 05401
(802) 863-1308

Learning Through Landscapes
Third Floor
Southside Offices
The Law Courts
Winchester S023 9DL
England

Life Lab Science Program
1156 High Street
Santa Cruz, PA 95064
(408) 459-2001

Project Wild
5430 Grosvenor Lane
Bethesda, MD 20814
(301) 493-5627

Schoolyard Habitats
National Wildlife Federation
1400 16th Street N.W.
Washington, D.C. 20036-2266
(202) 797-6800

Note: To celebrate International Schoolgrounds Day, which is May 1 this year, National Wildlife Federation is offering a colorful free poster packed with garden ideas and dozens of informational resources for ways to create and use school gardens for innovative education. To receive a free poster, call or write the NWF at the above address.



Finding the Heart in the Wood

by Lauri Alice Brunton

City Kids Participate in Philadelphia Green Community Tree Programs



Room 202 adopts a Tree! Proud second graders at Patterson Elementary School celebrate the adoption of their young tree at Elmwood Park in West Philadelphia. At the tree adoption ceremonies, the class is given a photo of their tree and a certificate. Students will continue to water the tree as needed.

Malcolm X Memorial Park, just across the street from Huey Elementary School in West Philadelphia, hasn't been a safe place for children to play for many years. Now, however, neighbors are eager to push their way back into the four-acre space. "We've already had two schoolwide events there this past year: an Earth Day, and a Harvest Festival. Now we're planning a third for the spring. Our students have learned to draw the park's trees through *Art-in-the-Park*, and they've helped clean up litter during clean-up days. I'd like to start an adopt-a-trash-can program as soon as we can," says Kate Loal, a spirited science teacher at Huey. "We want our students to become the leaders of the future. We want them to know their importance and significance in the community."

When the friends of Malcolm X Memorial Park received assistance through the Pennsylvania Horticultural Society last spring to revitalize Malcolm X Park, Huey School was included in the project. "We saw beautifying the park as a way to bring

together students, community and families to play a vital role in bettering our neighborhood," notes Loal enthusiastically.

Huey School is one of several schools throughout Philadelphia participating in the exciting youth and school education programs through PHS's Philadelphia Green. Most of Philadelphia Green's environmental programs for youth have a unique ingredient: to nurture relationships with neighbors, and to recover deteriorating parks and squares. Through newly formed partnerships, children learn tree care, gardening, and other arts and crafts. They work with Tree Tenders on tree labs in their schools, and in parks with other park groups. By seeing the results of their work — a sturdy tree, a blooming tulip garden, a clean and inviting park — they can better understand their lasting impact on the community and the value of shared responsibility.

School children help restore neighborhood squares and parks

"Children can sense where there is

danger. The way canaries measure safe air in coal mines, children can measure the safety of a park. When a park becomes safe for children to play in, they'll naturally flock to the green open space," says Marcy BonDurant, project manager at Philadelphia Green's Parks program. Philadelphia Green has begun several youth projects as part of their revitalization work in nine Philadelphia parks. Projects like *Art-in-the-Park* and *Adopt-a-Tree*, both of which take place in parks near schools, fulfill a basic part of revitalization: getting people to use the green space and feel proud of it.

On a foggy day in January, the trees at Carroll Park in West Philadelphia seem both majestic and sinister. But benches, recently painted orange, yellow, blue and green by the community, add cheer even on this gray day. At the Park's west end stand five young trees in the shadow of several full-grown giants. Just recently adopted by five classes at nearby Bluford Elementary School, these young trees were planted as part of the P.G.'s *Adopt-a-Tree* program. The process of adopting a tree is simple:



Left: "Children can be enemies or advocates for trees; as advocates we must give them good tools to work with," says Mindy Maslin, project manager of Environmental Education. As part of the *Adopt-A-School* program, Maslin helps kids at Vare Middle School prepare their tree planting beds for winter. Tree Tenders will set up additional work days and a summer maintenance plan to help the kids care for their new trees. **Right:** Project Rainbow, a transitional housing program for homeless women and their children, has entered their children's container garden into PHS's City Gardens Contest almost every year since 1990. With instruction from Sister Diana Cerchio and Sister Maureen O'Hara, pre-school children who live at Project Rainbow plant and tend vegetables, a fig tree, golden muscat grapevines, red raspberries and beautiful flowers year-round.



staff from Philadelphia Green make appointments with schools to talk with students and teachers about tree care. They ask each class if they would like to plant and care for their own tree in a nearby park. It's an offer hard to refuse. Teachers at the schools have taken hold of the new program wholeheartedly and have incorporated the adopted trees into their science curriculums.

"We've planted tulip, sycamore and zelkova trees so far," says Yvonne Richardson, a fourth grade teacher at Bluford School. "We've gone down twice to water the trees, and the kids have a ball. They're learning that trees put oxygen back into the air. They're also very protective of their trees." She laughs, "They want to know why the other class's tree is bigger than theirs."

Bluford principal Joyce Guy-Patton said at the adoption ceremony that the students name their trees after their own Learning Community name: "Every child knows they belong to a learning group at school, so giving their tree the same name helps them to associate school with the park."

Students at the Timothy Academy at 47th and Lehigh adopted a young tree last December at Fairhill Square. Second grade teacher Kathy Ann Tipping says that after they adopted the tree, the park has become a part of her students' world. "It's uncommon for my kids to see growth in the cities. Now, they can go over to the park and read stories around the tree. In the spring, when we have units on seeds and growth, we'll use our tree for hands-on learning."

Maurice Hutelmyer, an environmental science teacher at Patterson Elementary School has also participated in the *Adopt-a-Tree* program. "We brought 120 kids, in bulk, over to Elmwood Park with jugs to water their new trees. With staff from Philadelphia Green, we had an adoption ceremony for them." Hutelmyer says the

new program has motivated Patterson's kids in the field of science. "Going over to visit their trees is a reward, like a mini-field trip. They just absorb the hands-on tree care and truly see how the sun and tree can work together."

Because trees are alive, ever-changing, and rooted in the earth, the *Adopt-a-Tree* program is important to children in a special way. When kids adopt a tree in a park, they learn how to care for the tree and for that community space. They also begin to feel a sense of ownership and pride toward the tree and toward the park itself.

The Adopt-A-School program — Tree Tenders help school kids maintain trees

Through PHS's Outreach department, school students learn about tree care by way of a different partnership program. "Children can be enemies or advocates for trees. To be advocates we must give them good tools to learn from and work with," says Mindy Maslin, Philadelphia Green project manager for environmental education. "We discovered that a good way to maintain the health of trees planted at schools year-round would be to join the schools with people in communities." In the *Adopt-a-School* program (different from the *Adopt-a-Tree* program), staff from Philadelphia Green link "Tree Tenders" graduates with schools to insure the long-term health of trees in tree labs. Usually enclosed within a fence with herbs and flowers in the spring, tree labs are small plots of land on school grounds where students grow and maintain six to eight trees. When the trees reach maturity, the students transplant them around the school.

Tree Tenders are people from neighborhoods throughout Philadelphia interested in the health of city trees. A three-part course, taught by Philadelphia Green staff, teaches them about city stresses on trees, standard tree care procedures, and ways for

the community to organize and fundraise. In return for these free lessons, the graduated Tree Tenders promise to continue caring for the trees in their neighborhood. They inventory and plant trees, limb up branches, prune, mulch or write grant proposals for more trees on their streets. The *Adopt-a-School* program, created as another option for Tree Tenders in 1996, lets Tree Tenders select a school to "adopt." They agree to work with kids at the school's tree lab and to develop tree maintenance plans for the school year and summer. In addition to providing ongoing technical assistance when needed, PHS provides Tree Tenders with materials and trees.

"Trees soften the harshness of the city," says Tom Lederer, a veteran Tree Tender, PHS Council member and participant in the *Adopt-a-School* program. A man overflowing with new project ideas for the kids, Tom graduated from the first Tree Tender class back in 1993. He began working to improve his neighborhood in South Kensington more than 20 years ago, and found that tree care was a wonderful way to accomplish his goals. "Our first planting at the John Moffet School was on a large inside lot on school grounds. With the students, we planted trees all around the perimeter so they would have somewhere to go and play. Then we got native trees for free from Temple University and planted a mini-nursery in another corner of the school."

At least once a month, he and fellow Tree Tender Korbin Jenk go down to John Moffet's playground to teach interested kids about trees. "Theresa rounds them up for us during the day, and we meet up after school. Oh, we have fun. In the summer, we set up the hoses for the kids from the Recreation Department's environmental program and water the trees at least once a week."



At Fairhill Square, Philadelphia Green Parks project coordinator Jeff Tober explains how to water trees using recycled bottles or jugs to Timothy Academy students. Students will continue to water the tree as needed.

Theresa Venhaus, senior food service worker at the John Moffet School and environmental leader for the Philadelphia Department of Recreation, keeps quite a schedule with her jobs, but always makes time for the kids. "Before Tom came in with the *Adopt-a-School* program three years ago, we didn't have any of these trees or gardens. Now we've got trees at the school, and over at the Hancock Playground as well. Tom invited the school's environmental group to plant trees three years ago. They dug holes, prepared the ground and they continue to water the trees. The kids planted bulbs around the trees to help keep others from dumping on them." She adds, "These kids are from a concrete world. All they see are factories and empty houses. We expose them to the good stuff, we teach them. Of course we toss the leaves around

for a while before we get organized — why not — the colors are so beautiful. When we're done, we shellac some of the leaves and make them into magnets to take home and stick on the fridge."

The *Adopt-a-School* program has inspired a lot more than just tree care at the John Moffet School. It's difficult to catch up with all of Tom's ideas as they roll off his tongue. "We've got a butterfly garden now. We've got 50 types of trees in our neighborhood, and what I'd like to do is to bring over the kids, have them paint different colors and numbers on the curbs and then make a chart with the names of corresponding tree species." Undoubtedly, all of these ideas will come to fruition with Tom, Theresa and Korbin at the helm.

Susan Patrone, a former teacher for elementary public and Catholic schools,

became a Tree Tender in 1995. Until May 1997, she was pruning trees all over her neighborhood for her tree care contribution. When she received literature from Philadelphia Green about the *Adopt-a-School* program, she joined in. "It was a good way to focus my energy. I began a little training with a group of seventh grade kids at the Annunciation of the Blessed Virgin Mary in South Philadelphia." She goes to the school once a week. "I like working on a curriculum that means something, that really helps kids get in touch with what's real, what's alive." Last spring we planted six trees at the school, and six or seven trees at the church. We've made centerpieces from pruned pine trees in the winter and bark rubbings. We're teaching them more than basic tree biology, we're teaching them how to change their habits."

When Marcella Nixon, PHS's youth education outreach coordinator, waves to a class of eighth graders through a glass classroom door, faces light up in recognition. She's been out of town for a few weeks and missed the class's last tree lab activity. "Someone knocked down one of our trees," several raised voices clamor at once as Marcella slips into the room. "And what are you gonna do about it," she responds. Already proud and observant of their tree, the students reply in a chorus: "Put it back up and watch it doesn't happen again!"

When thirty something adolescents take the time to care for a small tree, spontaneously volunteer to work, and smile, all in a moment, something meaningful *must* have taken hold. Hooray for neighborhoods that work together to make schools, streets and parks come alive with trees. Evergreen, deciduous, elm and sycamore trees around the City will endure for many years to come with such a knowledgeable generation of caretakers at their side.

Other Youth Education Opportunities at the Pennsylvania Horticultural Society

The Pennsylvania Horticultural Society offers many other education programs to children year-round:

- **Junior Flower Show**

The Show, held in Memorial Hall in Fairmount Park, opens to the public on Wednesday and Thursday, May 20-21, 1998. Modeled after the Philadelphia Flower Show, the Junior Flower Show offers preschoolers to high-schoolers the opportunity to compete in horticultural and artistic classes. Registration begins May 18; Judging is on May 19. For more information or for a schedule and registration form, contact Flossie Narducci, (215) 988-8897.

- **Harvest Show**

The Show opens to the public Saturday and Sunday, September 19 and 20. The youth section of the Show welcomes entries from children, preschool through high school; they compete in horticulture, design and special exhibits classes. Registration is one September 17 and 18. For more information, please call Flossie Narducci, (215) 988-8897.

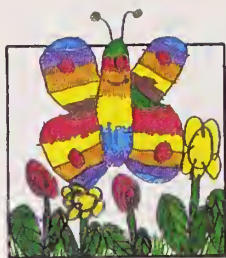
- **City Gardens Contest**

The City Gardens contest has categories for kids too! Enter as an individual or with a group. Please enter by June 10. For more information or an entry form to be mailed to you, please call Flossie Narducci, (215) 988-8897.

How to participate in:

- **The Tree Tenders *Adopt-a-School* Program**, contact Marcella Nixon, (215) 988-8843.
- **Parks environmental education programs**, including the *Adopt-a-Tree* or *Art-in-the-Park*, call Marcy BonDurant, (215) 988-8897.

Lauri Alice Brunton is Publications associate at the Pennsylvania Horticultural Society. She edits the *PHS News* and *Philadelphia Green News*.



Planting the Seeds for Future Gardeners

by Art Wolk

A children's garden at a public library in New Jersey captivates children and adults

All gardens have moments when their beauty and mystery overwhelms potential gardeners.

The magic doesn't take place in a classroom, by reading a book, or by staring at a computer. More than likely, it's seeing the first dew-covered rose of spring, harvesting a first tomato, or germinating one's first seeds that steer you down the irreversible path to the point where you finally say, "I am a gardener."

Most of us forget that it was the magic of the garden that first worked its spell on us, and that it's the same for all gardeners, regardless of age. So it follows that if we want to pass the trowel to the next generation, it shouldn't be done by coaxing or cajoling, but by letting the magic happen. Garden writer Rosalind Creasy said it best: "Gardening is caught, not taught!"

I've found that the best way to catch the interest of children is to treat the garden as if it's a living playground. And like a playground, what's needed is fun — lots of it, and in a variety of forms and sizes. Sometimes that's all it takes for certain children to become horticulturally hooked.

Stories, seeds, and young gardeners

Back in 1991, I had the idea of starting a Storytime Garden at the Winslow Township Branch of The Camden County Library System, where I'm manager. Although the library is in Camden County, it actually sits within the New Jersey Pinelands in a rustic setting about 100 yards from Route 73, near some of the last farmland in the area. It may be the only library in the world that has pink lady slipper orchids within 100 feet of the back door.

Long before I became a librarian, I was using my local library as a resource to learn life skills. As a teenager, books by Ben Hogan taught me how to play golf; and once I caught the gardening "bug" as an adult, books by Elvin McDonald and James Underwood Crockett taught me how to garden. Without the neighborhood library, I might never have been on my high school golf team or won my first blue ribbon at the Philadelphia Flower Show. I suppose it was only natural that I eventually gravitated to a career as a public librarian.



Sensitive plant (*Mimosa pudica*), the action hero of the botanical world, commanded the attention of every child that visited the Storytime Garden. The leaves and stems droop instantly when touched.

Most adult library patrons know how a library can help them learn new skills, but it usually takes a long time before children make the connection.

In 1991, I decided to change that.

At our branch, we have weekly storytimes for children 3-5 years old. Aside from reading stories, the children's librarian involves the kids in games and crafts. Although children in this age range don't have a great deal of manual dexterity, I figured they were dexterous enough to plant seeds and transplant sturdy seedlings.

After I got the go-ahead from my boss, other details fell into place. The local Friends of The Library agreed to pay for the start-up and ongoing costs of the

garden; Winslow Township's Public Works Department provided grass clippings for mulch; and the Maintenance Department repaired a nearby spigot for a water source. What was especially helpful was that the children's librarian at the time, Loretta Zink, was almost as obsessed with gardening as I.

We decided to start our first seed planting program in late March. A thin layer of snow lay on the ground outside, while indoors the first magical moments of the growing season began. After starting with stories about children planting gardens, Zink demonstrated the variety of seed shapes by using construction paper cut-outs. She showed them how seeds are

planted and what seedlings look like when they germinate (see book list with this article). When I took over, I demonstrated how real seeds are planted and showed flats of seedlings in various stages of growth.

Finally, with the parents' help, flower seeds were handed out and planted in flats. Using large seeds, like those for zinnias and marigolds, made sowing easier for the kids. Even so, it was amazing to see the difference between the dexterity of a 3- and a 5-year-old. The older children took mere seconds to accurately plant their seeds. The youngest kids sometimes took 30 seconds to get their seeds into the right hole. I particularly remember one child who thought she could drop a seed from 2 feet above the flat, and have it fall down into a 1/2-in. hole.

The seeds germinated within a few days after planting. Then, after spending about two weeks under fluorescent lights, the seedlings went out into cold frames. In early May, the same children that planted the seeds came back to plant the flower garden.

The garden soil was granular and almost impossible to till when dry. So we dug individual holes for each seedling and added topsoil. After observing how transplanting was done, each child planted two seedlings by themselves. Some of the parents and adult volunteers were especially helpful at this stage, since certain kids needed a bit of encouragement to take the plunge. Eventually, they all got the idea that this could be fun to do. It was a good thing those first transplants were sturdy, because some of the kids took a stranglehold on the seedlings as if they were javelins.

Over the next few weeks, each visit to the library was preceded by a check on how each child's "own" particular plants were faring. Considering the existing soil, I was particularly amazed at how fast the seedlings took off. The combination of all-day sunlight, fertilizer, moisture, and mulch yielded excellent results. By mid-July, the flower garden was bursting with color.

Plants that reach for the sky

In thinking about the make-up of the garden, I tried to look at things through a child's eyes. Their world is small compared to ours, and we seem like giants to them. The size difference can be really astounding to them. That's why small children are fascinated by large animals. And, in our library, it's almost impossible to have too many books on dinosaurs, the largest land animals of all time. So the first order of



Nehemiah, Leah, and Jeremiah Williams test the inside wall of the Storytime Garden's living tent.

For some youngsters used to fast-paced movies and sports, the garden held little interest until they got one look at the action hero of the botanical world: sensitive plants (*Mimosa pudica*).

business was to have features that would dwarf the kids who came to visit.

What could be more amazing to children than planting a small seed, that grows into a plant that eventually becomes taller than they are? Most of the marigold and zinnia seeds planted by the children did just that.

What was even more exciting to them was the second feature in the garden. Towering 10 feet tall, a tent of morning glory (*Ipomoea tricolor* 'Heavenly Blue') or purple hyacinth bean (*Dolichos lablab*) plants grew to that height in just two months. The tent's small entrance was the perfect size for small visitors. By mid-July, every child that stopped by the library went inside the tent. It had everything a child could want: Size, mystery, and a temporary place to get away from adults. Sometimes it took quite a bit of coaxing to get a child to come out (see box).

This feature was so popular that in some years we erected more than one tent, with a tunnel of climbing nasturtiums (*Tropaeolum majus*) or moonflower (*Ipomoea alba*) between the two.

After the first frost, we collect the seeds

from the hyacinth beans for the next year's garden. The seeds themselves are an object of fascination because the outer coat is black, with a perfect white streak in the middle. It looks like an oval-shaped Oreo cookie.

Another climbing curiosity is love-in-a-puff (*Cardiospermum halicacabum*). It starts out small and petite, with foliage reminiscent of tomato leaves. But if you give it support, the plant will reach 7-8 ft. by late summer. Its minuscule flowers are easily ignored by youngsters. But soon, 1 1/2-in. puffs appear; each contain three seeds. When ripe, the spherical seeds have an exterior with a perfect, off-white heart set against a black background.

In some years, we've had squash climbing up a tent-shaped trellis. The best choice is luffa squash (*Luffa cylindrica* [*aegyptiaca*]), since it isn't affected by borers. The fruits can be dried, the skin and seeds removed, and the skeletonized interior used for a sponge. Children are fascinated by these curious, useful plants.

The "please touch" garden

Still another useful plant, if not the most useful plant in humanity's history, is cotton. I'd seen it many times in my travels to the southeastern U.S., and thought it would be a treat for children to see it in the Storytime Garden. One species in particular, Levant cotton (*Gossypium herbaceum*), bears early enough so that if the seeds are planted indoors by the last week in February, the plants will have a long enough growing season to produce billowing balls of cotton. The children couldn't keep their hands off it — which was just fine, since we wanted the Storytime Garden to be a "please touch" garden of discovery. It was especially enlightening for small kids to realize the cotton originally comes from plants, not first-aid packages.

For some youngsters used to fast-paced movies and sports, the garden held little interest until they got one look at the action hero of the botanical world: sensitive plants (*Mimosa pudica*).

Within a short time, every child, and more than a few parents, became mesmerized by these plants that instantly collapse when touched. Unfortunately, local rabbits also had a keen interest in sensitive plants, so we eventually surrounded a group of them with chicken wire and supplied bamboo sticks to make the plants collapse.

We not only provided sensitive plants and cotton for curious fingers, but also lamb's ears (*Stachys byzantina*), whose leaves are as soft as its name implies. This



This young artist wears a trash bag to stay clean during the 'Pumpkin Paint,' the last Storytime Garden activity of the year.

perennial is such a fast grower, we didn't mind it when kids occasionally took home their own "ear."

To involve another of the five senses, we added fragrant-leaved plants to the garden in 1997. These included lemon basil (*Ocimum basilicum* 'Citriodorum'), licorice basil (*O. b.* 'Licorice'), cinnamon basil (*O. b.* 'Cinnamon'), and pineapple sage (*Salvia elegans*). Children and adults were seen rubbing the leaves and sniffing all summer.

Aside from plants used for the living tents, the fastest growers in the garden are pumpkins. Seeds from Atlantic Giant pumpkins (*Cucurbita maxima* 'Atlantic Giant') are planted in early spring and

transplanted in May. By late June, several fruits are off and growing at a fantastic rate. During the summer, it's not unusual to see both children and parents heading straight for the pumpkin patch whenever they visit the library.

For a bit of fun one year, I used a sharp knife to scratch "Storytime Garden" into the flesh of the pumpkins when they were only 12 in. long. The words expanded along with the fruits during the growing season. When the pumpkins reached over 100 pounds and the letters of "Storytime Garden" were about 3-in. tall, an elected official paid a visit to the garden. He stared quite covetously at the huge pumpkins and said, "I think you should have written

The children couldn't keep their hands off it — which was just fine, since we wanted the Storytime Garden to be a "please touch" garden of discovery. It was especially enlightening for small kids to realize the cotton originally comes from plants, not first-aid packages.

"Stolen From The Storytime Garden" on those gorgeous pumpkins." I replied how fortunate it was that the garden was facing the police department. So far, none of the pumpkins have been "borrowed" from the garden without staff — or police — permission.

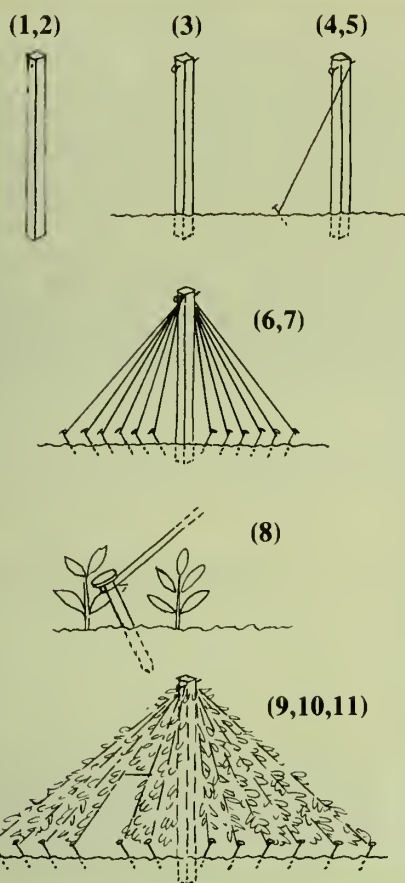
The season comes to a close in the fall when we have a pumpkin painting and carving program. The Storytime Garden's pumpkins usually finish their life as art objects made by the children or library staff.

The Storytime Garden — not just for children

Is the garden a success? I think it's been so on many levels. It's certainly made children, and perhaps even some adults, aware of the magic that can occur each time they set foot in a garden.

Even hard-to-impress teenagers have come under the garden's spell. I knew the garden was a success when I saw two teenaged girls park their bikes and make a beeline for the garden. After a brief tour, one turned to the other and said, "This garden is so cool!"

What I didn't expect was the effect that the garden would have on me. After all, I was an ardent gardener years before I started the Storytime Garden. I had already experienced many magical moments in a variety of gardens. What I hadn't realized was how wonderful it could be to watch the faces of young, potential gardeners when they first discover the excitement, beauty,



How to Make a Living Tent in the Garden

Living tents are much easier to erect than their massive size might suggest. Just follow these easy steps and watch it work its magic on children.

- 1) Obtain a pole at least 8 ft. tall. We use a 10-ft.-tall, 4-in. × 4-in. cedar post in the Storytime Garden.
- 2) Drill a hole about 5 in. from the top of the post wide enough for a 7- to 9-in. nail or bolt. Put the nail or bolt in the hole.
- 3) Find a sunny site, then sink the bottom of the post about 12 in. into the ground.
- 4) Tie a rope to the top of the post.
- 5) Tie the other end of the rope to a tent peg or 8-in. nail set about 7-8 ft. from the bottom of the post. (I use slip knots for both of the above knots, but others will work as well.)
- 6) Continue tying ropes to the spike at the top of the post and to the tent pegs in the ground until you have 12 ropes forming a circle around the tent. The ropes should be evenly spaced around the post, but leave one slightly larger space (about 3 ft. wide) for the entrance of the tent. If you're using cotton rope, be certain that the rope is not underground, or it will rot.
- 7) Tie one horizontal piece of rope about 3 ft. above the entrance.
- 8) Plant two morning glory or purple hyacinth bean plants next to each rope.
- 9) Put down a mulch of grass clippings or other material inside the tent.
- 10) You may have to guide the plants onto the ropes in the beginning, but before long they'll engulf the entire structure.
- 11) Keep the entrance clear enough for young gardeners to enter.

and wonder that a garden can provide. It allowed me to see a garden not just through my eyes, but also through theirs. It was a dimension of gardening I had never experienced before, but one I hope I'll continue to be a part of — forever.

Visit the Storytime Garden

The Winslow Township Branch Library's Storytime Garden is best visited from late June until the first frost in October. It's within Winslow Township's Municipal Complex, which is on Route 73, 7.5 miles south of the Berlin Circle in Camden County. For details, call (609) 567-9770.

Art Wolk writes and lectures on a variety of gardening topics. He's manager of the Winslow Township Branch Library, where he can be found spending too much time in the garden books section. He'd like to thank his fourth grade teacher, Marilyn Popp, for first introducing him to the magic of gardening.

Books for Young Gardeners and Their Parents

Blue Potatoes, Orange Tomatoes: How to Grow a Rainbow Garden, Rosalind Creasy, Sierra Club Books for Children, San Francisco, CA, 1994.

Flower Garden, Eve Bunting, Harcourt Brace & Co., San Diego, CA, 1994.

Garden Crafts for Kids: 50 Great Reasons to Get Your Hands Dirty, Diane Rhoades, Sterling Publishing Co., New York, NY, 1995.

Grandpa's Garden Lunch, Judith Caseley, Greenwillow Books, New York, NY, 1990.

Mrs. Rose's Garden, Elaine Greenstein, Simon & Schuster, New York, NY, 1996.

My Father's Hands, Joanne Ryder, Morrow Junior Books, New York, NY, 1994.

Seed Sources

The Fragrant Path
P.O. Box 328
Ft. Calhoun, NE 68023
Catalog, \$1
(The BEST seed source for a children's garden)

Park Seed Co., Inc.
P.O. Box 46
Highway 254 North
Greenwood, SC 29648-0046
(800) 845-3369

Stokes Seed Co.
P.O. Box 548
Buffalo, NY 14240
(800) 263-7233

The Thomas Jefferson Center
for Historic Plants
Monticello
P.O. Box 316
Charlottesville, VA 22902
Fax (804) 977-6140
(Send a long self-addressed stamped envelope)



SUNLIGHT PRINTING

Use the Cyanotype Printing Process to Preserve Favorite

 by Lauri Alice Brunton

I often come upon the crumbling stems of dried wildflowers, the powdery remains of a petal, broken sea shells, or ripped and drying leaves, stowed away in the far corners of my pockets. When that happens, I usually stand frozen with recollection, ancient remnants still in hand, scanning my memory for the source of that once live and lovely sample. Was I traveling in a far away city, or was I walking along my favorite evening route? Was I with friends or family, or was I alone? What was that place to me? Little by little, the fog lifts, and I am once again returned to that moment in my life when, taken with a piece of natural beauty, I plucked it from its home to keep it for my own.

I'm not alone in this pursuit. Many of us feel such a pull. The texture of a berry bush, with its protective thorns and velvety fruits, the mysterious translucence of seaweed, or the complicated twists of a spider flower lure us to closer examination. Then often, we want to collect those things, to remember the moment and place where ivy recklessly grew, to keep it forever in our memory. And so we dry flowers, pressing them into journals; we carry blank paper and pen to illustrate the subtle curve of a tree branch; and we form societies and clubs dedicated to the preservation and printing of natural materials.

Because my pockets are not the most

appropriate place to store my delicate findings, I thought it time to learn a new plant preservation method; one where I could keep specimens intact, recreate the unique characteristics of a particular landscape, and experiment with preserving plants properly. I chose the unusually simple, yet rewarding and accurate photographic nature-printing process called cyanotype.

This process has gone by several names during its history. Today, cyanotypes are most commonly known as blueprints; they have also been called sunprints, my personal favorite. In other circles they have been called photograms, a term given to any photographic process *not using a camera or negative* to produce an image. In a photogram, a photo is made by allowing a physical object to cast its shadow on a recording surface, then exposing it to light. Because cyanotypes use this principle, some refer to them as photograms.

The cyanotype, from the Greek meaning "dark blue impression" or blueprint, is one of the most permanent of all photographic processes. Blueprints were invented, and the process published by an English astronomer, Sir John Herschel, in 1839. Herschel was interested in using the chemical action of light as an analytical tool for studying various substances. He discovered that the action of ultra-violet rays on exposed iron-salt chemicals produced a vibrant "Prussian Blue" background and a white negative image. He coated paper with these chemi-

cals, placed plants on top of the paper, and exposed the paper to the sun's rays. The result was an accurate outline of the plant, and beautifully subtle white and blue tones according to the plant's tissue opacity.

For the mid-19th-century botanist, the cyanotype process provided a quick, simple and inexpensive alternative to the *exsiccati*, or bound herbarium, nature print or other fine plant illustrations. Botanist and artist Anna Atkins published the first book printed and illustrated by photography in 1843 using the cyanotype process. Her book, *British Algae: Cyanotype Impressions*, was intended as a companion to William Henry Harvey's unillustrated *Manual of British Algae*, published in 1841. She produced nearly 400 images for 12 additional books over several decades. A reproduction of the work is still available in public libraries: *Sun Gardens, Victorian Photograms* by Anna Atkins.

Collect your own landscapes

For the 20th century gardener, botanist, horticulturist, artist or plant enthusiast, the methods for preserving plants are practically innumerable: we can choose from illustration, computer graphics, photography, a plethora of printing techniques, and more. Many of these methods are as quick, inexpensive, and practical as the cyanotype process was for Anna Atkins in the last century. For me, the cyanotype process had



Exploring a special landscape is an integral part of the process. Here, the author collects specimens from the Long Island Sound, along the Connecticut coast. The translucent qualities of sea weeds and coastal grasses emerge especially well on a cyanotype print.

Botanical Specimens

The cyanotype process can also be applied to fabrics to create stunning quilts, blankets, curtains or clothing.

For over twenty years Barbara Hewitt and her husband John Basye, owners of Blueprints-Printables in Burlingame, Calif., have perfected the art of blueprinting. Using both fabrics and paper as a printing medium, they have taught classes and workshops, and given demonstrations on the process to arboretums and individuals throughout the United States. Because blueprints are photographs, not dyes, the fabrics can be washed and will look wonderful for many years. Their company carries pre-coated fabrics, papers, and gift card packages, as well as blueprint solutions and other crafts.

To order, write or call:

Blueprints-Printables
1400 A Marsten Road
Burlingame, CA 94010
1-800-356-0445
Fax 650-348-2888

a special attraction: information about the process was a challenge to come by, and was a series of small explorations unto itself. First, I had to dig through the stacks of the Free Library of Philadelphia before I



Lunaria, assorted wild grasses, and young ferns are carefully placed together in a graceful interpretation of moons over a meadow in this cyanotype print by Lauri Brunton and Christopher Dardaris.

discovered Anna Atkin's work; she was a woman little known, but who dedicated her life to preserving the natural world on paper. Because this book did not include instructions about the actual process, my library explorations continued until I was satisfied I had gotten enough information to begin my own work.

Then also, the process of collecting plants for cyanotype prints is oddly intimate. Because of the unique tonal language of the cyanotype, focusing on the veins, opacities and geometries of a plant is important as you go about your collecting. What a wonderful thing it is to lose one's self in the intricacies of a leaf, a stem, a bit of kelp. After collecting, special care must

be taken not to bruise or crush your findings, to keep them in good condition while traveling home to your cyanotype materials.

Finally, there is the excitement of playing alchemist. Working in a dark room, mixing together a solution, coating paper, and arranging specimens to set in light is a slow and luxurious process, one that requires patience and a love for the subject. Gauging the sun's energy to mark the image is also a fascinating reminder of its speed and strength, and our own dependence upon it for life.

See how to make a Cyanotype or Sunprint on next page.

How to Make a Cyanotype

Step 1. Have Paper and Specimens on Hand.

Begin by selecting a piece of paper. Any blank white sheet will do; however, watercolor paper seems to work best. Try *Rives BFK*, available at most arts and crafts supply stores. Cut or tear the paper to a size you like. The size may vary according to how you wish to use the finished print later.

Gather your collected specimens.

Step 2. Prepare a Light-Sensitive Chemical Solution.

The recipe for a cyanotype print solution combines *ferric ammonium citrate* and *potassium ferricyanide*.* (The chemicals are available from chemical suppliers in crystalline form. Please see box listing chemical suppliers.) Use old quart yogurt containers to prepare a solution by mixing the chemicals with water. In one, mix 20 grams of *ferric ammonium citrate* with 100 ml. of water. In another, mix 8 grams of *potassium ferricyanide* with 100 ml. of water. Make sure all chemicals are dissolved before placing them into light-tight containers; these are easily made with recycled bottles wrapped in duct tape or colored with black marker. These keep indefinitely. Next, combine the chemical solutions. In subdued light, mix one part *ferric ammonium citrate* with one part *potassium ferricyanide*, then pour a small amount of the mix into a plastic dish to be discarded after use.

Step 3. Coat and Dry the Paper

Now that you have your sun-print solution prepared, you're ready to coat your paper. Dip a small sponge brush into the solution until well saturated and spread an even amount across the intended image area. Don't be afraid to rewet your brush to get an even coating. Although the solution is deep green when in the dish, it should be a yellowish color after applied to the paper. Next, dry the paper in a dark area. When dry, the paper's coated area should be a translucent silvery-green color.

Step 4. Design Your Print and Expose It to Sunlight.

Arrange your collected specimens atop the dried paper. Be sure your leaves, flowers, grasses, seaweeds, feathers, ferns, herbs or vegetables are also dry and pressed flat. As you arrange, remember that in the finished print, the area of paper *not exposed to the sun* will become varying tones of white, while the exposed surface will become a brilliant shade of blue; this is why we call them sunprints. When you're satisfied with your design, lay the paper and specimens on a piece of wood, cover with a large piece of glass, and set in the sun. Some books may be added to the edges of the glass to assist in the pressing process, but this is optional.

4a. Let your template sit in the sun's rays for at least 30 minutes; the length of time will vary according to the sun's intensity. If you want to peek at the image, do so carefully as any movement of the specimens will appear on the final print. You'll know you've exposed your paper to sunlight long enough when various shadowy white tones mark the outlines of your specimens.

photos by Christopher Dardaris

Step 5. Develop in Water.

Now you can develop your sunprint. Separate paper from glass and wood, and submerge in water for two minutes or until you get desired tones; it will turn deep blue immediately but you must wait a bit for more tones to develop. If your image washes completely away when you submerge it in water, that means you should have exposed it longer. If your image turns completely blue then you have exposed it for too long. Finally, hang your sunprint on the clothesline to dry. Your sun-print is complete and will probably last longer than you.

Now that you've completed your sunprint(s), here are some ideas for using them:

Bind them into journals for yourself or to pass on to a younger generation. Make them into gift cards and send them to friends and family year-round. Add the botanical name of the plant to the sheet before or after exposing to light and use it as a record of your gardens through the years. Frame and hang them in your home.

*A chronic toxicity hazard assessment was done by James L. Byard, a registered toxicologist in California, for chemicals *potassium ferricyanide* and *ferric ammonium citrate*, used to treat papers or fabric in the cyanotype process. The criteria used for this evaluation are those published by the Consumer Product Safety Commission in the Federal Register, 16 CFR 1500, and current toxicologist practice. The cyanide ion present in potassium cyanide is tightly complexed with iron in the compound *potassium ferricyanide*, and is released only under conditions of **extreme** heat or acidity. These products have been found not to pose a significant chronic toxicity hazard to the consumer and no warning is required for use.

5



For Further Reading

**A Beachcomber's Botany, An Illustrated Handbook of New England Shore Plants and Seaweeds*, Loren C. Petry; illustrations by Marcia G. Norman. The Chatham Conservation Foundation, Inc., 1968.

Blueprints On Fabric, Innovative Uses for Cyanotype, Barbara Hewitt, Interweave Press, CO, 1995.

**Flora Photographica, Masterpieces of Flower Photography 1835 to the Present*, William A. Ewing, Simon & Schuster, NY, 1991.

The Keepers of Light, William Crawford, Morgan & Morgan Press, NY, 1979.

**Printmaking in the Service of Botany*, Gavin D.R. Bridson & Donald E. Wendel, Hunt Institute for Botanical Documentation, Carnegie

Mellon University, Pittsburgh, PA, 1986.

Sun Gardens, Victorian Photograms, Anna Atkins (text by Larry J. Schaaf, organized by Hans P. Kraus, Jr., Inc. 1985), Library of Congress, catalog card number: 85-047822 ISBN: 089381-203 X. This is a reproduction of her book *British Algae: Cyanotype Impressions* first printed in 1843.

To receive a sample copy of **The Nature Printing Society Newsletter**, produced quarterly by the Nature Printing Society, send \$1.00 to:

Sonja Larsen, Editor
Nature Printing Society Newsletter
7675 Interlachen Road
Lake Shore, MD 56468-8650

*Available on loan to PHS members through The McLean Library of PHS.

Suggested Resources for Chemical Suppliers

Antec Inc.
721 Bergman Avenue
Louisville, KY 40203
(502) 636-5176

Bryant Laboratory Incorporated
1101 Fifth Street
Berkeley, CA 94710
(800) 367-3141

Photographs Formulary
P.O. Box 950
Condon, MT 59826
(800) 777-7158

Lauri Alice Brunton is Publications associate at the Pennsylvania Horticultural Society. She is editor of the *PHS News* and *Philadelphia Green News*. She contributes to *Dodge City Journal*, where she writes book reviews and articles about urban studies and city life.

Christopher Dardaris is a working photographer in Bucks County, Pennsylvania. He is the director/owner of Lightuse Studios, a commercial photography studio specializing in photographing the natural world. He has published work in *Salt* magazine, and shows photography throughout the Philadelphia region.

The Baltimore Herb Festival

 by Jane G. Pepper

When I arrived at Leakin Park, Baltimore on a glorious Saturday last May, I knew I was in the presence of serious plant lovers. From the trunks and back seats of their cars and trucks they unloaded baskets and bags, backpacks, kids' wagons and small wheelbarrows. As I walked from the parking field to the site of the Baltimore Herb Festival, I listened in on their conversations. One couple, recently retired I gathered, was talking about the herb garden they had started to develop that spring. A young woman was in search of unusual varieties of peppers for her vegetable garden, and a family with small children had recently dug over a piece of lawn for the kids. Today was the day they would choose the herbs their daughter wanted to have in her plot. With more than 80 vendors on site, there were herbs to suit every taste at this Herb Festival, along with every conceivable product made from herbs — soaps, candles, wreaths — and lots of associated items, such as books about herbs, and notepaper and potholders with herb designs. Now I understood why the families walked with such eagerness — here there was much to learn, much shopping to do — and the day was beautiful.

The person who provides this special day for some 3,000 local and regional visitors is Mary Louise Wolf. The Herb Festival is organized by a Planning Committee, that helps with everything from publicity to parking and ticket sales, but I gather the grandmother and chief executive of it all is Wolf, an engineer who retired in 1984 from Westinghouse. The year after she retired, Wolf took along a friend "who knew the Mayor," to visit the head of the Baltimore Department of Recreation and Parks to sell him on the notion that she and her friends should start a day with herbs in beautiful Leakin Park. Before he decided, the Parks Department official asked Wolf to conduct a survey to determine if there was interest in such an event. Rather than settle for the pen and pencil variety, Wolf set off in her motor home to survey herb growers within a 70- to 80-mile radius of Baltimore.

Wolf's research convinced the Parks Department to support her plan for the first

Festival in May, 1987. With 40 vendors signed up, Wolf turned her attention to Festival events, including demonstrations and lectures. The latter would be held in the Leakin Park Chapel, built by a Baltimore resident in the 1840s to celebrate the upcoming birth of his first child. Sadly, his wife died in childbirth, but the City had maintained the Chapel after the land was turned into a park, and it seemed the perfect site for Wolf's lecture series.

With good publicity, all seemed well for the first Baltimore Herb Festival until the heavens opened in the middle of the sale

All seemed well for the first Baltimore Herb Festival until the heavens opened in the middle of the sale and lightning struck the chapel. A fire ensued that severely damaged the building and killed one visitor, but Wolf was not to be deterred.

and lightning struck the chapel. A fire ensued that severely damaged the building and killed one visitor, but Wolf was not to be deterred. She noted that first herb sale "was kind of a scrappy event," even before the rain started, but she was also aware that gardeners were becoming increasingly interested in herbs. Even more important, her vendors were eager to return.

Since that first difficult year, the Baltimore Herb Festival has grown into an annual pilgrimage, not only for the visitors, but also for the vendors, some of whom got into the business of herbs at the end of the '80s. Rob and Lucy Wood, for example, were teaching art and coordinating education programs in Baltimore. They longed to be "closer to the land," so they purchased Sproutwood Farm, with 26 acres in Glen Rock, Pennsylvania, where they would grow herbs and use their artistic talents to create wreaths and arrangements. Last year, they sold hundreds of wreaths at the Herb Festival, along with almost 800 little herb plants grown by friends in greenhouses across the ridge in Glen Rock. During the first years, says Rob, "visitors wanted the tried and true — basil and dill, for example.

Today, gardeners still buy many culinary herbs, but they are also looking for medicinal herbs, such as chamomile and echinacea, as well as the unusual varieties of sage and thyme."

For the Woods, the Festival is not only a good commercial opportunity, but also an occasion to renew old friendships made at the Festival. One such couple is Len and Gerry Janus of Vileniki — An Herb Farm in Montdale, Pa. The Januses started their business in 1979 on a 17-acre farm where they grow more than 400 varieties of herbs in 3½-in. pots for sale in spring. Their business also includes a couple of acres of demonstration gardens, a gift shop and a mail-order catalog, in which they explain that in the folk lore of Eastern Europe, the "Vileniki are wood spirits who possess great knowledge of the healing properties of every plant under their protection." The Vileniki catalog features mints and lavender, hyssop and bay as well as information on their annual herb festival and a series of lectures on herbal topics. Len and Gerry have been vendors at the Baltimore Herb Festival since it started and over the years they decided they cannot compete with the Maryland herb growers, whose climate enables them to start plants earlier and grow them quicker. At their stall, they sell herbal books, carrying at least 200 titles each year.

Unlike the Janus and Wood families with a decade of experiences at the Baltimore Herb Festival, Madeline and Tom Wajda rented a booth for the first time in 1997 and were amazed at how well they did considering the large number of vendors. "People never stopped coming," said Madeline. "We sold 600 to 700 plants and almost 200 jellies — then we ran out." When I asked Madeline how she got into this business, she responded "insanity." Courtesy of her husband's career in the foreign service, she and her family lived all over the world, from Senegal to Iran to New Zealand. Their second to last posting was in Paris, where they were able to indulge their life-long interest in good food. When Tom retired, they combed the territory within a two-hour radius of Washington, D.C., home to children and friends, searching for an old house with



Serious plant lovers gather for the 11th Annual Baltimore Herb Festival to buy unusual herbs and to attend lectures and demonstrations.

"property, a pond and a stream." At Willow Pond Farm, eight miles west of Gettysburg, Pa., they found all of the above, including 32 acres, an old greenhouse, a huge barn and a summer kitchen.

The first few years at Willow Pond Farm it was hard to make ends meet and Madeline spent her summers baking herb biscuits, herb breads and herb cakes to sell at farmers' markets. Gradually, they have developed a business in herbs without need to bake round the clock. In the barn, they

have a workshop where they run classes; in the summer kitchen, Madeline has a gift shop, where she sells herbal jellies, soaps, dips and mixes, as well as dried flowers and gift baskets. In the spring, they sell herb plants at the Farm and also at local farmers' markets. For Madeline, one of the real pleasures of her business is bringing the knowledge of herbs and their uses to people in her rural area. "In and around urban areas," she says "people are familiar with unusual herbs, but it's much harder to

make a sale in our part of the country." Every local customer she converts into an herb fancier reinforces her conviction that she and Tom made the right decision in taking their first steps into "insanity" when they purchased the Farm.

Marti Cook has never sold a plant at the Herb Festival, but over the years she has sold hundreds of bars of soap, hand lotion and body powder, all made with goat milk. Included in her line of products, which are all chemical free and therefore very sooth-



photo supplied by Vileniki — An Herb Farm

Although Len and Gerry Janus of Vileniki — An Herb Farm in Montdale, Pa., grow more than 400 varieties of herbs for their own spring sale, they have returned to the Baltimore Herb Festival each year since its beginning to sell more than 200 different herbal titles.

ing to people with sensitive skin, is a soap made with rosemary and lavender.

How, you might ask as I did of Marti Cook, does one get into the business of making soap with goat milk? When Cook found herself out of a job after 25 years with General Electric, she quickly bought two horses, then added some sheep, rabbits and three goats. Within no time, she had more goat milk than she knew what to do with. Living with her family at the time was a novice missionary who made her own soap. One night, after they had put the kids to bed, they decided to experiment with making soap using goat milk. Today, Cook's business, which is in Pasadena, Maryland, includes the production of goat milk products (not including cheese because she is not licensed by the State of Maryland as a dairy) and the sale of goats as breeding stock. In the breeding season, she may have 50 to 60 goats and kids under her care. When she started the business, Cook's husband used to stir the soap when he was watching football games. One day, he made a delivery to an ink manufacturing company, where he found the owner using small-scale cement mixers to produce ink. Just the job for making soap he said to himself and sure enough, all of Cook's production is now in these machines. In addition to the Baltimore Herb Festival, the Cooks also sell at craft fairs, through distributors across the country and by mail.

Bertha Reppert of Rosemary House, Mechanicsburg, Pa., was one of the herb enthusiasts Mary Lou Wolf surveyed on

her motor home tour in 1985, and Reppert vividly remembers sitting on her back porch tossing around ideas. "Mary Lou has done a wonderful job," says Reppert "and she has built this Herb Festival into one of the best in the country." One of the secrets of Wolf's success, according to Reppert, is that "she's a total martinet and a Prussian general of the old school." Quality control is rigid at the Baltimore Festival and Wolf screens every vendor carefully. Booths can only carry herb-related products, and Reppert says that if a vendor shows up with unrelated products, he or she will find they do not receive an invitation to participate the following year.

Reppert started Rosemary House in 1968 in downtown Mechanicsburg, and today the business has evolved into a display and teaching garden, and a shop from which Reppert sells all kinds of herb seasonings and dips, books on herbs, dried herbs and fresh herb plants spring through fall. Also in her shop you will find towels, T-shirts, hot pads and everything on which she can include a herb design or message.

Herb sales are wonderful affairs. Between vendors and visitors there's a great sense of camaraderie; everyone is there to learn or to teach — and you can come home with a car loaded with delicious flavors and smells, for a small price.

This year try to attend at least one herb sale, be it in Baltimore or closer to Philadelphia at one of the events listed in the Plant Societies listing on pages 33 to 37.

The 1998 Baltimore Herb Festival

The Baltimore Herb Festival is co-sponsored by the Planning Committee, Baltimore Herb Festival; Baltimore Department of Recreation and Parks; and the Maryland Department of Agriculture.

When: It is always held on the Saturday of Memorial Day weekend, from 10am to 5pm. This year, the Festival will be on Saturday, May 23, at Leakin Park.

Admission: \$4.00.

Directions: To get to Leakin Park take Exit 16 (Rt. 70) off the Beltway (Rt. 695) toward Baltimore. Turn off on Security Blvd. Right at first light onto Forest Park Avenue. Right at next light onto Windsor Mill Road. For more information contact Baltimore Herb Festival, 2301 Pickwick Road, Baltimore, MD 21207, (410) 448-0406.

Catalogs

Marti Cook
Cook's Cottage Farm
8246 Baltimore-Annapolis Blvd.
Pasadena, MD 21122
(800) 860-0539

Rosemary House
710 S. Market Street
Mechanicsburg, PA 17055
(717) 766-6581

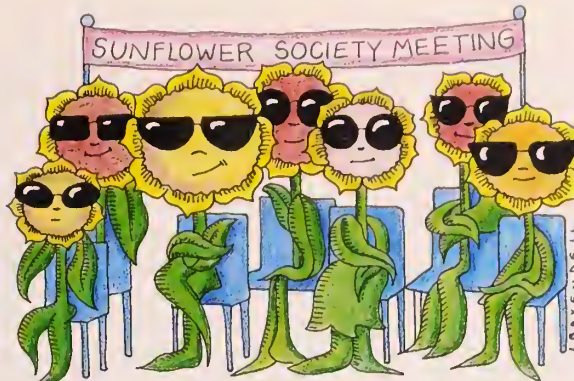
Vileniki — An Herb Farm
RD #1, Box 345
Montdale, PA 18447
(717) 254-9895

Willow Pond Farm
145 Tract Road
Fairfield, PA 17320
(717) 642-6387

Jane G. Pepper is president of The Pennsylvania Horticultural Society and manager of the Philadelphia Flower Show. Her recently published book, *Jane Pepper's Garden: Getting the Most Pleasure and Growing Results from Your Garden Every Month of the Year*, is available through Camino Books, Inc. at P.O. Box 59026, Philadelphia, PA 19102, Attn: Edward Jutkowitz. To order by credit card, call (215) 732-2491.

Plant Societies' Special Meetings and Sales 1998

 by Erin Fournier



YLBURN ARBORETUM ASSOCIATION, INC.

ylburn Market Day
May 9, 8am-2pm
ylburn Arboretum
915 Greenspring Avenue
Baltimore, MD 21209
1 Voluntary Parking Fee

Exotic and Native Plant Sale

Sept. 12, 8am-2pm
Cylburn Arboretum
4915 Greenspring Ave.
Baltimore, MD 21209

Contact:

Jane Baldwin
Cylburn Arboretum
4915 Greenspring Avenue
Baltimore, MD 21209
410-367-2217

RELINGHUYSEN ARBORETUM

10th Annual Harvest Show & Plant Sale

Sept. 18, 12:30-8pm
Sept. 19-20, 11am-5pm
Haggerty Education Center
Relinghuysen Arboretum
3 East Hanover Avenue
Morris Township, NJ 07960
Free Admission

*Sponsored by the Garden Club of America,
New Jersey Committee*

Contact:

Nancy Strong
Frelinghuysen Arboretum
53 E. Hanover Avenue
Morris Township, NJ 07960
973-326-7600

RIENDS OF THE FRELINGHUYSEN ARBORETUM

Distinctive Annual Plant Sale

May 2-3, 10am-4pm
Relinghuysen Arboretum
3 E. Hanover Avenue
Morris Township, NJ 07960

Contact:

Nancy Strong
Frelinghuysen Arboretum
53 E. Hanover Avenue
Morris Township, NJ 07960
973-326-7600

RIENDS OF THE U.S. NATIONAL ARBORETUM

Celebrate Spring! Garden Fair & Plant Auction

April 18, 9am-3pm
Free Admission
U.S. National Arboretum
New York Avenue Entrance
Washington, D.C.
202-544-8733

Great Arboretum Cookout

"1998 Tribute to Texas"
June 10, 6-9pm
Free Admission
(please make reservations)
U.S. National Arboretum
New York Avenue Entrance
Washington, D.C.
202-544-8733

MORRIS ARBORETUM

Plant Auction

Sept. 18, 5:30-9pm
Morris Arboretum
100 Northwestern Avenue
Chestnut Hill, PA 19118
\$50 per person

Plant Sale

May 8, 10am-7pm
May 9, 10am-4pm
May 10, 10am-4pm
Morris Arboretum
100 Northwestern Avenue
Chestnut Hill, PA 19118
\$4 Adults, \$3 Seniors

Contact:

Morris Arboretum
9414 Meadowbrook Ave.
Philadelphia, PA 19118
215-247-5777

COTT ARBORETUM OF SWARTHMORE COLLEGE

Arbor Day Celebration

April 25, 10am-2pm
Cott Arboretum
100 College Ave.
Swarthmore, PA 19081

Woody Plant Conference

July 17, all day
Scott Arboretum
500 College Ave.
Swarthmore, PA 19081
Contact PHS for
registration info.

Contact:

For Arbor Day Info:
Scott Arboretum
500 College Ave.
Swarthmore, PA 19081
610-328-8025

TYLER ARBORETUM

Arbor Day Plant Sale

April 25, 9am-3pm
Tyler Arboretum
15 Painter Road
Media, PA 19063
Free Admission

Pumpkin Days

October 17-18,
10am-5pm
Tyler Arboretum
515 Painter Road
Media, PA 19063
\$3 Adults, \$1 Children
(3-15 yrs), under 3
yrs. free, Tyler
Members free

Contact:

Tyler Arboretum
515 Painter Road
Media, PA 19063
610-566-5431

NEW YORK BOTANICAL GARDEN

"The Power of Herbs, 7th Annual Weekend of Healing Plants"

Sept. 12-13, 9am-4pm
New York Botanical Garden
200th Street & Southern Boulevard
Bronx, NY 10458-5126

Contact:

New York Botanical
200th St. & Southern Blvd
Bronx, NY 10458-5126
718-817-8174

UNIVERSITY OF DELAWARE BOTANIC GARDENS

Plant Sale

April 24 (Pre-sale pick-up), 2pm-8pm
April 25, 9am-4pm
Fischer Greenhouse
Agriculture Campus
University of Delaware
Newark, DE 19717

Contact:

Dept. of Plant & Soil
Sciences
Univ. of Delaware
Newark, DE 19717
302-831-2531

DELAWARE CENTER FOR HORTICULTURE

City Country Garden Tour

June 27, 10am-4pm
Purchase tickets ahead of
time

Delaware Center for
Horticulture
\$5 Members, \$20
Non-members

Rare Plant Auction

April 24, 5:30-10pm
Longwood Gardens
Conservatory
Kennett Square, PA
19348
Tickets: \$135, \$175,
\$300

Contact:

Delaware Center for
Horticulture
1810 N. Dupont Street
Wilmington, DE 19806
302-658-6262

BRANDYWINE CONSERVANCY

13th Annual Bonsai Show

Early June, 1998 TBA
Brandywine River Museum
US Rte. 1
Chadds Ford, PA 19317
\$5 Adults, \$2.50 Seniors

Annual Wildflower, Plant & Seed Sale

May 9-10,
9:30am-4:30pm
Brandywine River
Museum
US Rte. 1
Chadds Ford, PA 19317
Free

Contact:

Brandywine Conservancy
US Rte. 1, PO Box 141
Chadds Ford, PA 19317
610-388-2700

IRVINE NATURAL SCIENCE CENTER

7th Annual Native Plant Seminar & Sale

August 29, 8am-3pm
Irvine Natural Science Center
(located 1 mile North of Baltimore Beltway, Exit 22)
Fee for Seminar, Sale open to the public

Contact:

Irvine Natural Science
Center
Stevenson, MD 21153
410-484-2413

BOWMAN'S HILL WILDFLOWER PRESERVE

Plant Sale

May 9-10, 10am-4pm
Bowman's Hill Wildflower Preserve
New Hope, PA

Contact:

Bowman's Hill Wildflower
Preserve
PO Box 685
New Hope, PA 18938-0685
215-862-2924

AFRICAN VIOLET SOCIETY OF AMERICA, INC.

National African Violet Convention & Show

April 19-27
Raddison Hotel
Sacramento, California
Registration fee
Free admission to public on April 24, 1998
Hundreds of plants on exhibit and in competition
For Individual or Commercial

Contact:

Anne Tinari
2325 Valley Road
Huntingdon Valley, PA
19006
215-947-0144

AFRICAN VIOLET CLUB OF MORRIS COUNTY

Annual Show and Sale

April 4, 1:30-5pm
April 5, 10am-4pm
Haggerty Education Center, Frelinghuysen
Arboretum
53 E. Hanover Avenue
Morris Township, NJ 07960
Free Admission

Contact:

Nancy Strong
Frelinghuysen Arboretum
53 E. Hanover Avenue
Morris Township, NJ 07960
973-326-7600

AFRICAN VIOLET SOCIETY OF PHILADELPHIA**Monthly Meetings**

1st Thursday of each month
United Methodist Church
Ridge & Shawmont
Roxborough, PA

Plant Sale

Sat., Nov. 8, 1-5pm
Sun., Nov. 9, 12-4pm
Location TBA

Contact:

Margaret Cass
920 Andorra Road
Lafayette Hill, PA 19444
215-836-5467

SPRINGFIELD AFRICAN VIOLET SOCIETY OF DELAWARE COUNTY**Violet Exhibit & Craft Show**

May 1, 2 & 3, Mall hours
Springfield Mall
Baltimore Pike & Sproul
Road
Springfield, PA
Open to Public Sat. & Sun.

Meetings

1st Monday of every
month
7:30-10pm
Springfield Township
Bldg.
50 Powell Road
Springfield, PA

Contact:

Nancy Corse
222 Ridgewood Road
Media, PA 19063
610-566-5042

TRI-STATE AFRICAN VIOLET COUNCIL SHOW**37th Annual Show & Sale**

Nov. 7, 1:30-5pm
Nov. 8, 10am-4pm
Haggerty Education Center, Frelinghuysen
Arboretum
53 E. Hanover Avenue
Morris Township, NJ 07960
Free Admission

Contact:

Nancy Strong
Frelinghuysen Arboretum
53 E. Hanover Avenue
Morris Township, NJ 07960
973-326-7600

AZALEA SOCIETY OF AMERICA**National Meeting**

April 30-May 3, 1998
Fairfax, VA

\$25 Membership fee

*Quarterly Journal — *The Azalean*

Contact:

Azalea Society of America
PO Box 34536
West Bethesda, MD
20087-0536

AZALEA SOCIETY, BROOKSIDE GARDENS CHAPTER**Meetings:**

Bimonthly
Location & Dates TBA
For more information contact Bill Miller

Contact:

Bill Miller
7613 Quintal Court
Beheads, MD 20817
301-365-0692 (evenings)

GREAT SWAMP BONSAI SOCIETY**Annual Show & Exhibition**

June 6, 10am-3pm
Haggerty Education Center, Frelinghuysen
Arboretum
53 E. Hanover Avenue
Morris Township, NJ 07960
Free Admission

Contact:

Nancy Strong
Frelinghuysen Arboretum
53 E. Hanover Avenue
Morris Township, NJ 07960
973-326-7600

PHILADELPHIA BOTANICAL CLUB**Meeting:**

Fourth Thursday, September-May, 8pm
Third Thursday, November & December, 8pm
Academy of Natural Sciences
19th & Benjamin Franklin Parkway
Phila., PA 19103-1195

Contact:

Elizabeth B. Farley
Academy of Natural
Sciences
1900 Benjamin Franklin
Pkwy.
Phila., PA 19103-1195
610-667-0625

PHILADELPHIA CACTUS AND SUCCULENT SOCIETY**Plant Sale**

May 2, 10am-7pm
May 3, 10am-5:30pm
Peddler's Village
(Flower & Garden Festival)
Rt. 202 & 263
Lahaska, PA 18931
Free Admission

Meetings

2nd or 3rd Sunday (TBA),
1pm
September-June
Horticulture Center
W. Fairmount Park
Phila., PA

Contact:

Rita B. Hojnowski
517 Cecelia Drive
Blackwood, NJ 08012-3808
609-227-0599

DELAWARE VALLEY CHRYSANTHEMUM SOCIETY**Chrysanthemum Show**

Oct. 10, 1-5pm
Oct. 11, 10am-5pm
Longwood Gardens
Kennett Square, PA
Longwood Admission Cost

Plant Sale

May 16, 9am-4pm
Tyler Arboretum
515 Painter Rd.
Media, PA 19063

Contact:

Ralph B. Parks
821 Meredith Drive
Media, PA 19063-1740
610-566-5644

NEW JERSEY STATE CHRYSANTHEMUM SOCIETY**45th Annual Chrysanthemum Show & Sale**

Oct. 10, 2-6pm
Oct. 11, 1-5pm
Haggerty Education Center, Frelinghuysen Arboretum
53 E. Hanover Avenue
Morris Township, NJ 07960
Free Admission

Contact:

Nancy Strong
Frelinghuysen Arboretum
53 E. Hanover Ave.
Morris Township, NJ 07960
973-326-7600

AMERICAN CONIFER SOCIETY**National Meeting**

June 25-27
US National Arboretum
Washington, DC

Contact:

Maude Henne
PO Box 360
Keswick, VA 22947
804-984-3660

AMERICAN CONIFER SOCIETY, CENTRAL REGION CHAPTER**Regional Meeting**

July 31, August 1-2
The Dawes Arboretum
Newark, OH
Fee TBA

Contact:

Frank Goodhart
27 Oak Knoll Road
Mendham, NJ 07945
908-879-4788

DELAWARE VALLEY DAFFODIL SOCIETY**Daffodil Show at Longwood****Gardens**

April 18, 1:30-5pm
April 19, 10am-5pm
Longwood Gardens
Kennett Square, PA
Longwood Admission Cost

Plant Sale

Sept. 26, 10-2pm
Jenkins Arboretum
Berwyn Baptist Road
Devon, PA

Contact:

Ann M. Howe
7 Surrey Lane
Downton, PA
19335-1507
610-458-5291

NEW JERSEY DAFFODIL SOCIETY**23rd Annual New Jersey Daffodil Show**

April 17, 1-4pm
April 18, 10am-4pm
Haggerty Education Bldg., Frelinghuysen Arboretum
53 E. Hanover Ave.
Morristown, NJ 07960

Contact:

Shirley Cameron
231 Davison Place
Englewood, NJ 07631
201-569-9257

GREATER PHILADELPHIA DAHLIA SOCIETY**Annual Dahlia Show**

Sept. 19-20
(Longwood Hours)
Entries received 7-11:30am
Longwood Gardens
Kennett Square, PA 19348
Longwood Admission Price

Plant & Root Sale

May 21
Location & Time TBA
Call for more
information

Contact:

Steve Thomas
566 Sugartown Road
Malvern, PA 19355
610-644-4581

DELAWARE VALLEY DAYLILY SOCIETY**Daylily Show**

July 11, 1-5pm
Paoli Presbyterian Church
225 South Valley Road
Paoli, PA

Daylily Sale

Aug. 29, 9am Sale
Church of the Good
Samaritan
Paoli Pke & Rte. 30
Paoli, PA

Contact:

Beth Creveling
980 Bypass Road
Perkasie, PA 18944
215-249-0682
Cathy Tomlinson
610-458-0177

THE DELPHINIUM SOCIETY

****Looking for New Active Members**
(please call for more information)

Contact:

James B. Jeffrey
30 The Circle
East Hampton, NY 11937
516-324-5369

DELAWARE VALLEY FERN & WILDFLOWER SOCIETY**Fern and Wildflower Field Trips**

April-September TBA

Annual Meeting

November 7, 10am
Horticultural Center
Fairmount Park
Philadelphia, PA

Contact:

Ralph Wilen
143 Ridge Road
Southampton, NJ 08088
609-859-8685

**AMERICAN GLOXINIA & GESNERIAD SOCIETY
FRELINGHUYSEN ARBORETUM****21st Annual Show & Plant Sale**

Oct. 4, 10am-4pm
Haggerty Education Center
Frelinghuysen Arboretum
53 E. Hanover Ave.
Morristown, NJ 07962-1295
Free Admission

Meetings:

1st Thursday,
Feb.-June
& Sept.-Dec.
7:30pm
Haggerty Education Ctr.
Frelinghuysen Arboretum
53 E. Hanover Avenue
Morristown, NJ
07962-1295

Contact:

Quentin Schlieder
PO Box 1472
Morristown, NJ 07962
973-326-7600

**AMERICAN GLOXINIA & GESNERIAD SOCIETY,
LIBERTY BELL CHAPTER****Propagation Workshops & Speakers**

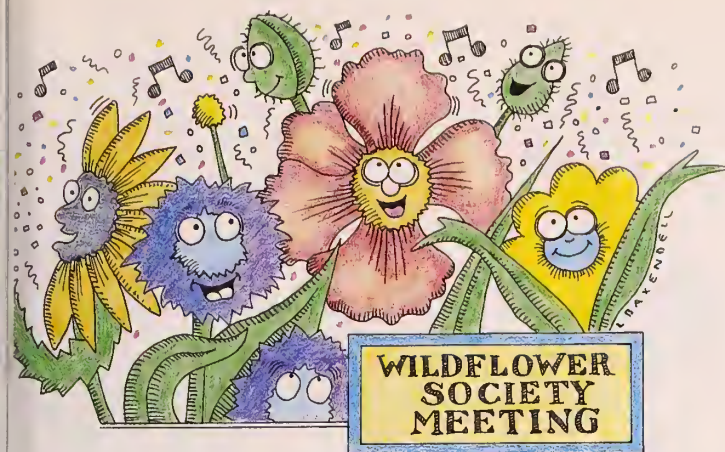
September-May, the 3rd
Tuesday of the month,
7:30pm
Location TBA

Spring & Fall Plant Sale

TBA, 7:30pm
Location TBA

Contact:

Laura Shannon
8845 Norwood Ave.
Philadelphia, PA 19118
215-247-8527



ARDY PLANT SOCIETY, MID-ATLANTIC GROUP

**March Into Spring"
Symposium**
March 28, 9am-3pm
re-Registration Required

Plant Sale
August 29
10am-12pm for
members only
12pm-2pm open to public
Frazer Mennonite Church
65 Maple Linden Lane
Malvern, PA 19355

Contact:
Carol McConomy
315 Keithwood Road
Wynnewood, PA 19096

ERB SOCIETY OF AMERICA, DELAWARE VALLEY UNIT

Plant Sale
May 16, 10am-4pm
Ballville Mill, Rte. 29
1/2 mile north of town)
Rockton, NJ

Monthly Meeting
Day Meetings: 3rd
Wednesday, 10am
Eve Meetings: 3rd
Wednesday, 7pm
Call for location

Contact:
Joan Noveske
6278 Groveland Road
Pipersville, PA 18947
215-297-5348

ERB SOCIETY OF AMERICA, NORTHERN NEW JERSEY UNIT

**8th Annual Herb Plant Sale
"The Fragrant Herbs"**
May 9, 10am-2pm
Melbarton School
Route 24
Morristown, NJ 07960

Monthly Meeting
2nd Thursday, Feb.-Nov.
Contact Betty Robrecht
for location

Contact:
Betty Robrecht
8 Hillcrest Boulevard
Hockessin, DE 19707
908-769-5640

ERB SOCIETY OF AMERICA, PENNSYLVANIA HEARTLAND UNIT

Herbal Delight Symposium
June 22-23, All Day
Lehigh Valley College
Reading, PA
Fee TBA

Contact:
Darlene Henning
173 Deysher Rd.
Fleetwood, PA 19522
610-987-6184

ERB SOCIETY OF AMERICA, PHILADELPHIA UNIT

9th Annual Herb Sale
May 7, 10am-2pm
Historic Yellow Springs Institute
515 Ridley Creek Road
Media, PA 19063

Contact:
Kathy Bepler
1515 Ridley Creek Road
Media, PA 19063
610-566-6261

HISTORIC BARTRAM'S GARDEN

Herb Plant Sale
May 2, 10am-4pm
Historic Bartram's Garden
4th St. & Lindbergh Blvd.
Phila., PA 19143

Contact:
Historic Bartram's Garden
54th St. & Lindbergh Blvd.
Phila., PA 19143
215-729-5281

HOBBY GREENHOUSE ASSOCIATION, DELAWARE VALLEY CHAPTER

Plant Auction & Picnic
May 16, 9am-12pm
Horticulture Center
Airmount Park
Phila., PA 19131

Meetings
March 21, 9am-12pm
May 16, 9am-12pm
June 20, 9am-12pm
Horticulture Center
West Fairmount Park
Philadelphia, PA

Contact:
Nan Van Basselaere
1120 Brennan Drive
Warminster, PA 18974
215-672-2784

HORTICULTURAL ALLIANCE, THE HAMPTONS

Garden Fair & Plant Sale
May 15, Preview Party
6-8pm
May 16, Plant Sale, 9am-2pm
25 Admission to Preview
Party
Plant Sale Open to Public
Bridgehampton Historical
Society

Lecture Series
April 24, 7:30pm, Dan
Hinkley, "Plant
Marriages"
May 22, 7:30pm, Henry
Eastwood, "Japanese
Maples"
June 12, 7:30pm, Susan
Austin, "Clematis"
Call for more information
& dates

Contact:
James B. Jeffrey
30 The Circle
East Hampton, NY 11937
516-324-5369

AMERICAN HORTICULTURAL THERAPY ASSOCIATION

Annual Conference

August 1-3
Albuquerque, NM
Fee TBA

Contact:

American Horticultural
Therapy Information
Service
301-948-3010

HORTICULTURAL SOCIETY OF SOUTH JERSEY

Flower Shows
May 12, 7:30pm &
Sept. 8, 7:30pm
Cherry Hill Community
Center
820 Mercer Street
Cherry Hill, NJ 08034
Free Admission

Meeting
September-June
Second Tuesday, 7:30pm
Cherry Hill Community
Center
820 Mercer Street
Cherry Hill, NJ 08034

Contact:

Rita B. Hojnowski
517 Cecelia Drive
Blackwood, NJ 08012-3808
609-227-0599

DELAWARE VALLEY HOSTA SOCIETY

Slide Lecture & Hosta Sale
Speaker: Alan Tower,
Spokane, WA
American Hosta Society
March 14, 1pm "Hosta Sale"
2pm "Lecture"

**Garden Visit & Hosta
Auction**
June 13, 1-4pm, 2pm
Auction
The Azalea Patch
2010 Mountain Road
Joppa, MD 21085
410-679-0762
Rain or Shine
Free & Open to Public

Ramada Inn
Rt. US 1 & 202
Chadds Ford, PA 19317
610-358-1700
Free & Open to Public

Contact:

Warren Pollock
202 Hackney Circle
Surrey Park
Wilmington, DE
19803-1911
302-478-2610
Fax: 302-477-1674

DELAWARE VALLEY IRIS SOCIETY

Spring Meeting
(Luncheon & Speaker)
March 29, 1pm
Duling-Kurtz House
146 S. Whitford Road
Exton, PA
\$12 for lunch

Iris Sale
July 18, 10am-2pm
Jenkins Arboretum
631 Berwyn Baptist Rd.
Berwyn, PA 19312

Contact:

Charles & Betsy Conklin
91 Duncan Lane
Springfield, PA 19064
610-544-3984

DIAMOND STATE IRIS SOCIETY

Bearded Iris Show
May 24, 12pm-5pm
Hockessin Memorial Fire Hall
Rt. 41 at Yorklyn Road
Hockessin, DE

Plant Sale
July 11, 10am-2pm
Lantana Square
Shopping Center
Rt. 7 (Limestone Road)
at Valley Road
Hockessin, DE

Contact:

Ether Martin
116 Meridian Drive
Hockessin, DE 19707
302-998-2414

THE GARDEN STATE IRIS SOCIETY, REGION 19

South Jersey Iris Show
May 16, 8am entry
registration
12-6pm Open to public
Deptford Mall
1750 Deptford Center Road
Deptford, NJ 08096

Iris Rhizome Sale
July 25, 10am-1pm
Deptford Mall
1750 Deptford Center
Road
Deptford, NJ 08096

Contact:

Margaret Griner
25 Mill Chase Road
Southampton, NJ
609-859-9251

Iris Show, May 24, 12-6pm, Quaker Bridge Mall, Route 1, Princeton, NJ

THE GARDEN STATE IRIS SOCIETY

Iris Society Show
June 21, 1-5pm
Haggerty Education Center
Frelinghuysen Arboretum
53 E. Hanover Avenue
Morristown, NJ 07960
(late blooming iris)

Annual Plant Sale
July 26, 10am-1pm
Haggerty Education
Center
Frelinghuysen Arboretum
53 E. Hanover Avenue
Morristown, NJ 07960

Contact:

Nancy Strong
Frelinghuysen Arboretum
PO Box 1295
Morristown, NJ 07962
973-326-7600

MID-ATLANTIC LILY SOCIETY

Lily Show
June 27-28, 10am-5pm
Longwood Gardens
Kennett Square, PA 19348

Bulb Sale
Oct. 25, 12-3pm
Jenkins Arboretum
Devon, PA

Contact:

Ellen Ressler
510 E. Conestoga St.
New Holland, PA 17557
717-354-9556

NATIVE PLANTS IN THE LANDSCAPE CONFERENCE

**Native Plants in the Landscape Conference &
Plant Sale**

Conference: June 11-13
Millersville University
Millersville near Lancaster, PA

Plant Sale: June 13, 8am-12pm
Millersville University
(plant sale and lectures open to the public June 13th)

Contact:

Dept. of Continuing
Education
104 Dilworth Hall
Millersville University
Millersville, PA
17551-0302
717-872-3030

PENNSYLVANIA NATIVE PLANT SOCIETY
"A Plant Celebration at the Mansion" & Plant Sale
 May 2, 10am-4pm
 May 3, 12-4pm
 Centre Furnace Mansion
 1001 E. College Ave.
 State College, PA 16801
 Various speakers, book sale, children's activities,
 family activities, and gardening supplies. Call
 Sarah Kelley for info. 814-234-4779

Contact:
 Native Plant Society
 PO Box 281
 State College, PA 16804
 814-238-8879

DELAWARE NATURE SOCIETY

Plant Sale **34th Annual Meeting**
 May 2, 9am-5pm April 8, 6:30pm
 May 3, 9am-3pm Ashland Nature Center
 Ashland Nature Center Brackenville & Barley
 Brackenville & Barley Mills Mills Road
 Rds. Hockessin, DE 19707
 Hockessin, DE 19707
 Exhibits, Walks, Specialty Booths

Contact:
 Linda J. Young
 Delaware Nature Society
 PO Box 700
 Hockessin, DE 19707
 302-239-2334

DELAWARE ORCHID SOCIETY

Orchid Auction **Meeting**
 February 15, 1pm 2nd Tuesday of each
 Delaware Veterans Hall month, Sept.-June,
 Veteran's Drive 7pm
 (off Naaman's Road) Delaware Veterans Hall
 Wilmington, DE Veteran's Drive
 (off Naaman's Road)
 Wilmington, DE

Contact:
 Pam Bowman
 537 Ridge Avenue
 Media, PA 19063
 610-566-3180

DELAWARE VALLEY ORCHID COUNCIL

10th Annual Speakers Forum **Monthly Mtg.**
 April 8, 8:30am-4pm 4th Thurs., Jan.-Oct.
 Travelodge Hotel 3rd Thurs., Nov. & Dec.
 Mt. Laurel, NJ Merion Friends Activity
 \$25.00 (incl. lunch) Center
 Speakers: Muneazu Ejiri, Dr. 615 Montgomery Ave.
 Henry Oakeley, Narberth, PA
 Marguerite Webb
 Topics: Cattleya Hybridizing
 in Japan, *Lycaste angulosa*
 Cultivation, Miniature
 Species

Contact:
 Lois Duffin
 7411 Boyer St.
 Phila., PA
 215-248-3626

GREATER PHILADELPHIA ORCHID SOCIETY

Orchid Auction **Monthly Meetings**
 September 24 4th Thurs., Jan.-Oct.
 Preview 7pm, 3rd Thurs., Nov.-Dec.
 Auction 7:30pm 8pm
 Merion Friends Activity Center Merion Friends Activity
 Center
 615 Montgomery Avenue 615 Montgomery Avenue
 Narberth, PA Narberth, PA

Contact:
 Lois Duffin
 7411 Boyer Street
 Philadelphia, PA 19119
 215-248-3626

SOUTHEASTERN PENNSYLVANIA ORCHID SOCIETY

1999 Orchid Show **Meeting**
 February 4-7, Mall hours 2nd Wednesday, Sept.-
 King of Prussia Mall, Court June, 7pm
 King of Prussia, PA Freedom Foundation
 Rte. 23
 Valley Forge, PA

Contact:
 Deborah Robinson
 2604 Horseshoe Trail
 Chester Springs, PA
 610-827-7445
 (please leave message)

SOUTH JERSEY ORCHID SOCIETY

Plant Auction **Monthly Meeting**
 Nov. 15, 1pm 3rd Sunday, Sept.-June
 Wenonah United Methodist Wenonah Methodist
 Church Church
 Willow Street Willow Street
 Wenonah, NJ 08090 Wenonah, NJ 08090

Contact:
 Barbara Inglessis
 Wenonah United Methodist
 Church
 Willow Street
 Wenonah, NJ 08090
 609-722-0393

PERENNIAL PLANT ASSOCIATION

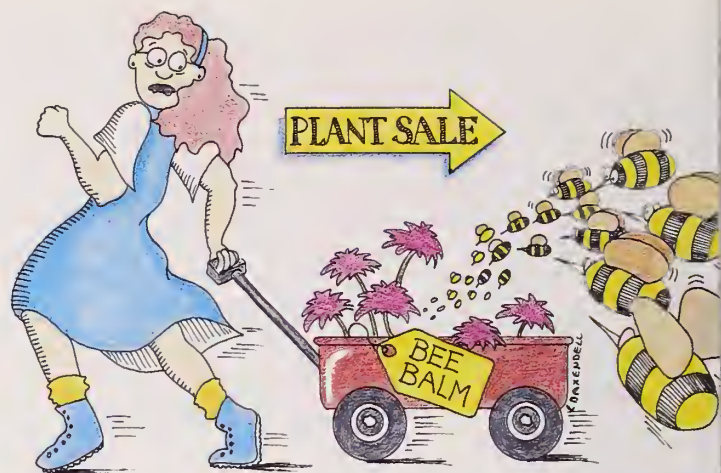
Perennial Plant Symposium & Annual Meeting
 July 6-11, All day
 Westin Hotel
 Boston, MA
 Fee TBA

Contact:
 Dr. Steven Still
 3383 Schirtzinger Rd.
 Hilliard, OH 43026
 614-771-8431

PERENNIAL PLANT CONFERENCE

Perennial Plant Conference 1998
 October 13, all day
 Scott Arboretum
 500 College Avenue
 Swarthmore, PA 19081

Contact:
 PHS Membership Dept.
 100 N. 20th Street
 Philadelphia, PA 19103
 215-988-8876



AMERICAN PRIMROSE SOCIETY, DORETTA KLABER CHAPTER

Seed Sowing Meeting February 6, 1999 Plyler Residence 18 Bridle Path Chadds Ford, PA \$5.00 membership fee	Plant Sale & Picnic Date & Location TBA \$5 membership fee	Contact: Dot Plyler 18 Bridle Path Chadds Ford, PA 610-459-3969
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AMERICAN RHODODENDRON SOCIETY, GREATER PHILADELPHIA CHAPTER

Annual Plant Sale & Truss Show May 9, 10am-4pm Morris Arboretum 100 Northwestern Ave. Chestnut Hill, PA 19118	Meeting 2nd Thursday, Oct., Nov., & Mar., 7:30pm Morris Arboretum 100 Northwestern Ave. Chestnut Hill, PA 19118 (call for more info)	Contact: Tom Conover 505 E. Wynnewood Rd. Wynnewood, PA 19096 610-896-7584
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AMERICAN RHODODENDRON SOCIETY, VALLEY FORGE CHAPTER

Truss Flower Show May 10, 12-5pm Longwood Gardens Kennett Square, PA 19348 Longwood Admission Fee	Plant Sale May 2-3, 9am-4pm Jenkins Arboretum 631 Berwyn Baptist Rd. Devon, PA 19333	Contact: Winfield Howe 7 Surrey Lane Downingtown, PA 19335-1507 610-458-5291
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NORTH AMERICAN ROCK GARDEN SOCIETY, DELAWARE VALLEY CHAPTER

Spring Plant Sale June 13, 10am Robbins Nature Center Butler Pike Ambler, PA Members Only	Meetings 2nd Saturday of the month Robbins Nature Center Butler Pike Ambler, PA (call for more info)	Contact: Dr. Jim McClements 50 S. Prestwick Court Dover, DE 19904 302-734-2836
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DELAWARE ROSE SOCIETY

Annual Rose Show Sept. 7, 1-5pm Terrace Restaurant Longwood Gardens Kennett Square, PA (call for exhibitor info) Longwood Admission	Meetings Last Wednesday, March-November Delaware Horticulture Center (call for more info)	Contact: Don & Marie Myers 1001 Timber Wyck Road Wilmington, DE 19810 302-529-7787
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DEL-CHESTER ROSE SOCIETY

38th Annual Rose Show June 13 (Roses entered 6-10am) Open to Public 1-6pm Terrace Restaurant Longwood Gardens Kennett Square, PA Longwood Admission Fee No fees for exhibitors	Pruning Demonstration Apr. 4, 10am <i>Rain Date: April 11, 10am</i> Memorial Rose Garden St. Maximilian Kolbe Church 15 E. Pleasant Grove Rd. West Chester, PA	Contact: Pat Pitkin 923 Springwood Dr. West Chester, PA 19382 610-692-4076
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PHILADELPHIA ROSE SOCIETY

52nd Annual Rose Show June 7 Roses entered 7-10:30am Open to Public 1-5pm Widener Education Center Morris Arboretum Chestnut Hill, PA 19118 Admission \$3 No fees for exhibitors	Rose Pruning Demonstration March 28, 1-3pm Morris Arboretum Chestnut Hill, PA 19118 Admission \$3	Contact: Pat Pitkin 923 Springwood Drive West Chester, PA 19382 610-692-4076
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WEST JERSEY ROSE SOCIETY

Rose Show
June 6
Entries 7-10:30am
Open to Public 1:30-8:30pm
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Voorhees, NJ 08043
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1st Wed. of each month
(except Jan. & July)
Voorhees Community
Center
White Horse &
Haddonfield Berlin
Rd.
Voorhees, NJ

Contact:
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Moorestown, NJ
08057-2609
609-235-3162

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Pond Tour
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Potluck/Picnic
Members & prospective
members only
\$20 Membership fee

Meetings
3rd Tuesday of month
7:30pm
Location TBA

Contact:
Fred Weiss
339 Valley Rd.
Menon Station, PA 19066
610-667-7545

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Plant Sale
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New Hope, PA

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Bowman's Hill Wildflower
Preserve
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New Hope, PA 18938-0685
215-862-2924

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April-September TBA

Annual Meeting
November 7, 10am
Horticultural Center
Fairmount Park
Philadelphia, PA

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Ralph Wilen
143 Ridge Road
Southampton, NJ 08088
609-859-8685

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**Wildflower Plant &
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Early June, TBA
Brandywine River
Museum
US Rte. 1
Chadds Ford, PA 19317

Contact:
Brandywine Conservancy
US Rte. 1
Chadds Ford, PA 19317
610-388-2700

For Future Listings

Green Scene publishes a list of area plant society meetings and plant sales annually in the March issue of *Green Scene*. List one major meeting and one plant sale only. **DEADLINE: October 30, 1998.** Please follow format used above. Write to: Erin Fournier, PHS, 100 N 20th Street — 5th floor, Philadelphia, PA 19103-1495.

Erin Fournier, Publications assistant, studies Horticulture at Temple University. Summers spent toiling in plant nurseries and long winters working in bookshops led her to the perfect career combination at *Green Scene* magazine and the Pennsylvania Horticultural Society.

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the green scene / march 1998

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18 27

GREEN SCENE

THE PENNSYLVANIA HORTICULTURAL SOCIETY • May/June 1998 \$2.75



*Light and Movement
in the Garden*
See page 29

in this issue

3. A Library for All Gardeners

Jean Byrne

4. Annual Fever

Cheryl Lee Monroe & Cindi Kistler

10. "Taylor" Your Garden for Perfect Vegetables

Art Wolk

15. Gardening Mentors

Adam Levine

20. Gardening in a Dry Woodland

Beverly Fitts

24. The McLean Library Cultivates Gardeners

Richard L. Bitner

29. Light and Movement in the Garden

Harriet L. Cramer

33. Seeing the Garden with "Feng Shui Eyes"

Vicki Mowrer Lashley

37. Classified Advertisements



4.



15.



24.

Front cover: *Hosta sieboldiana* 'Elegans' seems aflame when backlit on a cold November morning. See story "Light and Movement in the Garden," page 29. photo by Harriet Cramer

CORRECTIONS:

For Plant Societies' Special Meetings and Sales 1998, *Green Scene*, March 1998 issue, pages 33-37.

Delaware Valley Water Garden Society
NOT Delaware Water Garden Society

HERB SOCIETY OF AMERICA, PHILADELPHIA UNIT

59th Annual Herb Sale

May 7th, 10am-2pm

Will take place at: Historic Yellow Springs, Art School Road, Chester Springs, PA

NOT: 1515 Ridley Creek Road, Media, PA 19063

Volume 26, Number 5

May/June 1998

THE PENNSYLVANIA HORTICULTURAL SOCIETY

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Phipps Conservatory, Inc., Pittsburgh, Pennsylvania

The San Antonio Botanical Gardens, Texas

Staten Island Botanical Garden, Inc., New York

A Library for All Gardeners

by Jean Byrne



In *A Room of One's Own* Virginia Woolf complains that a kindly gentleman at the door to one of the great Oxbridge* libraries turned her away, regretting in a low voice "that ladies are only admitted if accompanied by a Fellow of the College or furnished with a letter of introduction."

We've come a long way since 1928; today Cambridge and Oxford let women into their libraries. Yet the past prohibition against using those and other libraries reminds us that our library privileges of today have not always been so democratically dispensed and are precious. (Anyone may use the PHS library; only PHS members may borrow books.)

I'm sure we all have library stories to tell. When I was a little girl I walked from 16th & Susquehanna to 6th & Lehigh once a week with two or three chums for my supply of books. I remember being stunned when the librarian suggested that they bend the rules and let our little coterie check out a couple of extra books each week since we obviously read our books and came a long way to get them. Right then I ranked librarians up there with the really good people, and I haven't deviated from that view since.

In so many of the writers' memoirs and

biographies that I've read, libraries have figured greatly in their development: As places of refuge or sanctuaries, as The Source of Information. I'm sure that children's perspectives on these precious oases have shifted with the advent of TV and computers, but PHS librarian Janet Evans and writer Richard Bitner are here to tell us that PHS's McLean Library is alive and thriving. Gardeners can be insatiable in their reading and research habits. See pages 24-28 for the comforting array of services and resources The McLean Library offers.


Dedicated gardeners often weave the story of their mentors into the story of their garden. Sometime ago Adam Levine publicly acknowledged his mentor Gene Smith when the City Gardens Contest posthumously named an award after the dedicated Spruce Hill community gardener.** In this issue Adam interviews five gardeners about their mentors (see page 15). We hope you find the stories as interesting as we have, and we invite you to share your memories about your mentors. We'll publish selected reminiscences in an upcoming issue of *Green Scene*. Send them to Editor, *Green Scene*, PHS, 100 N. 20th Street, Philadelphia, PA 19103-1495.

**Eugene E. Smith Memorial Award

*Oxford or Cambridge University

Annual Fever: *Annuals are Ho*

"Among the choicest flowers scattered throughout the world are some whose lives are short . . . the annual"

 by Cheryl Lee Monroe & Cindi Kistler

photos by Larry Albee/Longwood Gardens



The Idea Garden at Longwood Gardens in Kennett Square, Pennsylvania, is a fine place to do your homework. First, you'll find wild combinations of annuals that inspire you to change your old ideas. Second, every plant is labeled and you can make a list of the plants you want to grow next year.

The *Wall Street Journal* dubbed 1998 "The Year for Annuals." Who knew annual fever would be so high when only a few years ago the term annual reeked of marigolds and petunias. Gardeners are stretching horticultural horizons again and given the number of plants to explore, we'll be sifting and sorting this group for several years. Thank goodness.

Ten years ago when annuals were truly synonymous with marigolds and petunias, Fred McGourty, one of our favorite noted gardeners, wrote in a special *Green Scene* issue about annuals*: "Electric colors, ones of neon intensity are associated with some of the better known annuals, are best left to those gardeners who like pep rallies in the garden." Whoops! That's us. We worked hard cultivating perennial gardens and our Gertrude Jekyll sensibilities over those 10 years, but we have a new zest for color these days. We're stretching the line towards garish with vibrant purples, oranges, yellows and lime greens. We're

*"Annuals for Perennial Borders," *Green Scene*, July, 1987 Vol. 15, #6, page 12

weaving our Jekyll pastels with all sorts of new colors, mixing them all together to match our passion for living. Annuals present the perfect opportunity with the vast array of possibilities they offer.

We're referring to Zone 7-10 plants; those from other climates around our country and around the world. Annuals are traditionally defined as plants growing and flowering — completing their life cycle — in one season. Death, however, does not deter our current quest. Gardeners are happily adjusting to the idea of taking cuttings, saving seed, shoving plants under benches or into the basement, covering, mulching and best yet, looking for new plants to purchase each spring.

The small print on the hardiness contract includes several finer variations on the traditional definition of an annual. **Hardy annuals** are those plants that happily reseed themselves and usually don't take a beating with the first frosts. **Tender annuals** abhor Jack Frost and wither at the first visit; they generally prefer warm conditions including soil temperatures. **Tender**

perennials are a category of perennials that bloom the first year and need loads of winter cover outdoors, or can be preserved by bringing the plant indoors and/or taking cuttings. Lastly, **biennials** are those that generally take two seasons to complete their life cycle, one to grow, one to flower.

Annuals also go by cool and warm season designations, which give us clues on their favored cultural needs. Cool season plants love the crisp temperatures of early spring and fall and perform like crazy during those times, languishing in the heat of summer. They also germinate better in colder soils. Warm season annuals perform like gangbusters in the worst heat and generally need warmer soil temperatures to really get going. A note about sustenance: Annuals are generally vigorous and need regular liquid feeding with a high ratio of phosphorous (i.e. 5-10-5 or 10-20-10) to support their habits. Container-grown plants also do well with a dose of Osmocote (20-20-20) to go with its regular liquid feeding.

We've been sifting and sorting through

'n 1998

Alfred Hottes, *The Book of Annuals*



Agastache foeniculum 'Blue Fortune': a tough annual, throws up abundant lavender-blue spikes. Classified as an herb it won't flinch in the heat and in drier soils.

annuals ourselves (playing really), and commit our explorations to paper here. The following plants are some we've been growing, some that notable gardeners swear they cannot live without and some coming down the pike. The search alone is half the fun and you'll have to check your local garden centers, and sort through your catalogs (see our list). For a look at many of the plants and a fresh dose of thinking on how to use them, you can visit local public gardens, one of our favorite ways to fan the flames. The Penn State Flower Trials in Landisville, Pa., is a good place to get a peek at newer plants and to see how they perform. Their WebSite (garden.cas.psu.edu/garden-index.html) will let you in on what they are up to.

We had to contain our exuberance somewhat in deciding what to include. Due to space and sanity, we excluded such genera as geranium, coleus, euphorbia, impatiens and salvia. They all deserve articles entirely unto themselves. Forty-four new varieties of ivy geraniums alone were trialed at the Penn State Flower Trials in 1997. We

left those out too.

All in the family

Linaria maroccana, also known as toad-flax, is in the Scrophulariaceae family, one we identify with snapdragons. A plant that has been around for a long time, it remains underused. Perfect bubbling up in the cracks and crevices, spilling over the edges of containers or wandering amidst bulbs, this plant is a cool season annual and a great asset early in the season. Masses of happy miniature snapdragon flowers come in a mixed jumble of lavender, pink, red, white and yellow. A bushy plant with small straplike leaves, it reaches 12-24 in. depending on the cultivar. For a fall flush of color, you can sow seeds in August in shady spots where the soil is the coolest.

Linaria purpurea 'Natalie' is in the tender perennial category. Grey-green foliage with a silver cast enhances spurred lavender flowers with delicate bluish striations. The combination is terrific. This plant will reach 18 in. and reward you handsomely for a little deadheading. The best home

should have some late-day shade and good drainage. *L. purpurea* 'Canon J. Went' is a pink form on our list to try.

Diascia barberae, another Scrophulariaceae family member, hails from South Africa. A charming, delicate-looking plant, it is perfect spilling out of a container or mingling in the front of the border. Small spurred flowers come in soft pinks and salmons and line 18-in. trailing stems. Another cool-season annual, the blooms cease temporarily in summer heat. All is not lost; cut it back by about 1/3 and when night temperatures start to cool, you'll get a resurgence of flowers. *D. barberae* 'Black Thorn Apricot' is a lovely soft apricot, *D. x'Elliot's Variety'* has larger shell-pink flowers and *D. rigescens x'Ruby Field'* is a bright coral-pink with fine sprawling foliage.

One true snapdragon sneaks in the list of annuals deserving attention, and it is one you'd recognize by flower and not necessarily by foliage. *Antirrhinum hispanicum* [*glutinosum*] or Gummi snapdragon, has small velvety grey-green leaves, is trailing

Annual Fever

photo by Larry Albee/Longwood Gardens



One of the best aspects of annuals is that they don't get weary of August and are absolutely brilliant in the changing light and temperatures of fall. Here, at Longwood Gardens, the morning dew of early fall makes this annual and perennial garden glow. *Verbena bonariensis* is the tall purple at the middle and *Agastache foeniculum* 'Blue Fortune' is further down the walk.

and has small white snapdragon flowers along the stems. Planted in containers or spilling into the walkway best shows off the 6-in. low-growing wandering stems and super foliage. Pruning will encourage more flowers if you can bear it; we prefer the foliage. The newer selections offer lots of colors from pink to yellow and salmon. You have to give up the grey-green foliage for green and the blooms are clustered at the end of the stems. The new ones of merit are A. 'Layel', a yellow; A. 'Lasalor', a salmon; and A. 'Lampion Pink' and A. 'Lampion Yellow'.

Hailing from South Africa

Phygelius xrectus is an offspring of the cape fuchsias and has long red tubular flowers that bend down and tip up slightly at the end giving you a peek at gloriously colored throats and anthers. The foliage is a good dark green and the plant does very well in the sun. *P. x-rectus* 'Moonraker' is a pale yellow with a deep red throat streaked with yellow. Red anthers that extend beyond the lip of the flower add another bonus. Other selections include *P. 'Trewidden'*, a pink with a deep red throat and red anthers; *P. 'African Queen'*, which is a salmon orange; and *P. 'Winchester*

Fanfare', a shell pink.

Pentas lanceolata is a South African plant that, although not new, deserves more favor and is good competition for marigolds and petunias. The common name, Egyptian Star, beautifully describes loads of star-shaped flowers grouped in large clusters to form what appears as the flower head. The range of colors goes from lavenders to pinks, whites and reds; the reds being exceptional. Handsome dark green foliage reaches 1-2 ft. and serves to enhance the flowers. The bees, butterflies and hummingbirds love this plant, and your neighbors will want to know why they're all at your house. This plant also loves the heat, and mulch will help preserve the soil moisture it prefers. Light pruning will also ensure you get great numbers of flowers.

Phormium or flax lilies offer us wild foliage opportunities sure to stir up our gardens. You won't give a hoot about flowers when you have foliage that's upright, flat, leathery and straplike, looking like wild colored swords. There are reds of every description: coppery reds with pink margins, bronzes, dark wine red, purple red, dark red brown. And then there are the purples, tans, yellows and every variation on striping. An exciting new selection, *P.*

colensoi 'Apricot Queen' even promises dark green apricot and bronze. These are best overwintered inside in a warm bright room.

An herb in the crowd

Agastache is usually relegated to herb lists, especially *Agastache foeniculum*. A selection, *A. foeniculum* 'Blue Fortune' bears masses of fat, lavender-blue, bottle-brush flowers some 2-4 in. on strong upright stems. There's more: fragrance, the adoration of butterflies, foliage that holds up well, and flowers that dry well. This one is best put in the tender perennial category.

There's a whole slew of other *Agastache* selections, most arising from *A. barberi*. The foliage hugs the ground and loads of small, long, tubular flowers are jammed along upright stems. The bees, too, jam up on this plant. A. 'Tutti Frutti' has flowers the color of fruit punch, a rosy-purple, that arise from dark green basal foliage on 15-in. stems. A. 'Pink Panther' has dark purple-tinged foliage with super tall, 30-in. flower spikes heavy with rose-pink flowers. A. 'Apricot Sunrise' offers the best contrast, its great-looking grey-green leaves enhancing clear bright orange flowers that reach 15 in. All bloom from May to

continued on page 8

Marilyn Daly: The Dean of Annuals

Marilyn Daly's work and fun have converged. Her garden and her teaching responsibilities go hand in hand these days and the result is loads of excitement.

Daly, a professor of Anatomy and Physiology at York College in York, Pennsylvania, found her way into annuals when she began overseeing plant trials for graduate biology students. An innocent start with a few plots of annuals is now a few hundred trials at York College and at home. Daly also teaches the Annuals/Bienni-als course at Longwood Gardens in Kennett Square. She recently spent her sabbatical in South Africa sifting and sorting through a whole new palette of plants. She brought home seeds of some 130 plants she can begin to trial for our area. Here is a sample of some of her favored South African annuals.

Ceratotheca triloba, a South African foxglove, is from an entirely different family than the foxgloves (*digitalis*) we grow. These relish the boiling hot sun. The foliage is big, some 6 inches, dark green, three-lobed and pests don't mar it. The flowers' spikes are mostly mauve in color with deep burgundy veins and Daly is working on selecting for whites. Come fall you'll get wildly interesting horned and woody seed pods that persist through winter.

Leonotis ocymifolia is so crazy looking, Daly nicknames it her Dr. Seuss plant. You might be able to find it on a page in one of his books. Spiky square stems are streaked blue, grey and green, and stand some 6-8 ft. Tubular flowers

are clustered on the stem, seeming as if the stem pierces the flowers, the size of golf balls. People stop and gape at this plant; it is not for the faint of heart! Daly advises starting seeds early in February to ensure you get blooms by mid-July, blooms that will continue for 12 weeks until hard frost.

Asclepias curassavica is commonly called blood flower and comes from seed originating in England. The flowers are a spectacular deep red-orange, and to Daly they look like ballerinas complete with tutu because of the yellow reflexed corollas. The butterflies go crazy over this and you can count on it reseeding. *A. physocarpus* or swan plant, is shrublike, and reaches 4-6 ft. with pure white flowers. The best part comes in August when big, bold seed pods with wiry hairs appear. The peduncle, which holds the pod, expands and curls until you get this dangling 2-in. pale green fruit with wiry hairs. Dr. Seuss must have imagined this one too.

Emilia sonchifolia [javanica] is a small tassel flower; the flowers appear to float on thin delicate stems on only one ft. Leaves clasp the wiry stems widening where they wrap the stems and tiny tufts of orange flowers are like brush ends. The butterflies fight over this plant, and your challenge will be to enjoy the flowers for the crowd. This plant will self-seed.

Cheryl Lee Monroe

Below: *Ceratotheca triloba*.



photo by Bob Lenz



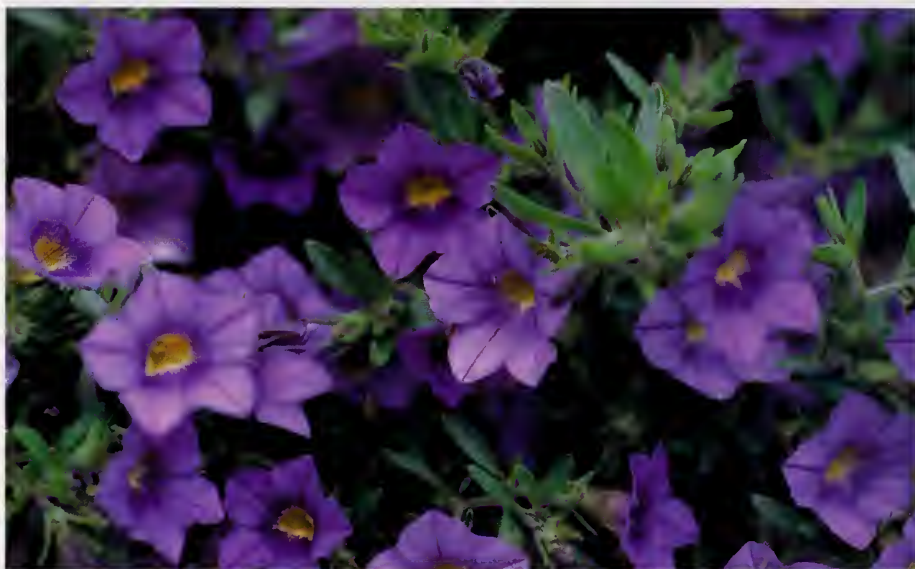
photo by Bob Lenz

Above: *Leonotis ocymifolia*.



photo by Marilyn Daly

Left: *Asclepias curassavica*.



Top: At PHS Headquarters in front of the Library, large planters overflow with *Verbena* 'Homestead Purple' in the foreground, and *Petunia integrifolia* (left). The annuals made an eye-catching September song with the tawny seedheads of feather reed grass and Northern Sea oats. *Pyracantha* 'Rutgers' backs the composition and will become the focus when winter arrives. **Middle:** *Calibrochoa* hybrids are usually referred to as Million Bells®, its trademark name. Never mind that most folks think this is a petunia. This is a new plant that appears to have millions, okay, well hundreds of petunia-like flowers covering low-growing, sturdy foliage. (Available at local garden centers.) **Bottom:** Dashing and clamoring for our attention this year *Gazbera*, the results of breeding work with *Gazania* and *Gerbera*. This will be a fresh face, hard to resist. Try it.

October and are not terribly fussy, sailing through the summer with the aplomb herbs are known for.

The African daisies

Osteospermum is a cool season annual, referred to as one of the african daisies. There are many that fit under this umbrella from *Arctotis* to *Gerbera* and *Gazania*. *Osteospermums* are the first daisies of the season and can be planted along with pansies for early color. Oversized daisy flowers have contrasting eyes and in the case of *Arctotis*, 'Silver Sparkler', the flowers are a satin white, the eyes a dark periwinkle blue. This selection gets rave reviews even when the flowers close for the day and give off this pale periwinkle blue cast.

Arctotis is not new to our palette but the smashing new colors are. Great daisy flowers and wild-colored, stand-out eyes are similar to *Osteospermum*. These are, however, warm season annuals. *Arctotis* adapt very well to a wide range of soils, tolerate heat, salt, and the first few frosts, blooming until late October. The hot new cultivars at the moment are: *A.* 'Flame' with fiery orange flowers and a violet blue eye atop sprawling silver, felt-like foliage; *A.* x'Rosita' with dusty pink flowers and dark eyes; and *A.* x'Tangerine' with grey curly foliage and salmon-yellow blooms. You pick a favorite.

Gazbera is the new kid on the block and is the result of fiddling with gerberas and gazanias. You get gerbera-like flowers and gazania-like foliage. The Penn State Flower Trials bore witness to the fact that this plant is covered with loads of salmon orange daisy flowers all atop velvety grey-green foliage. Reaching 12-in., it relishes the scorch of summer's heat and currently comes in reds and yellows. If you remember how it feels to be a kid in the candy store, you'll want to try this one.

A daisy of another flavor

Rudbeckia is a favorite composite flower, one that usually conjures up visions of perennials. *R. hirta* is best known as our native biennial and also offers some good annual selections that are easy from seed and impervious to heat and sun. *R.* x'Indian Summer' is 30-36 in. tall with super large flowers, some 6-9 inches. A cut flower lover's dream and an All American Selection in 1995, the petals are golden yellow with dark brown cones. *R.* 'Irish Eyes' fits our penchant for lime green with light, golden yellow petals surrounded by a great lime green eye. *R.* 'Rustic Colors' comes in good bronze and mahogany shades with

very black cones for contrast. Last, and least in size, is *R. 'Toto'* with small button-like flowers on compact 10-in. plants.

One lonely, lovely vine

Ipomoea lobata [*Mina lobata* in some catalogs] flowers like crazy and is such a vigorous vine that even when sown in June, will cover an 8-ft. structure. The foliage alone is an asset with dark green, twining, three-lobed leaves. The best part, however, are the loads of boat-shaped (no kidding) flowers that go through a wide range of colors as they age; starting with crimson, progressing to orange, and finally turning yellow and cream. Each spray will have flowers of all ages and colors hanging on it all at one time. It flowers in July and keeps going until a hard frost.

A new look at old favorites

Verbenas have long been valued for their low-spreading habit, their vigor and for what seems like a zillion color possibilities. *Verbena bonariensis* begs to be different. Foliage that hugs the ground is the beginning and end of its similarity to *V. xhybrida*. Lilac flowers are clustered atop stiff upright stems reaching 3-4 ft. and blooming from midsummer until frost. The architectural quality of this plant is terrific. Termed a "see-through" plant, it mingles well in perennial borders or can be planted amid annuals like petunias and begonias where the flowers seem to dance above them.

Verbena 'Homestead Purple' is a good vibrant purple and more typical of the hybrids we often use. Tough and very vigorous, this is an excellent choice if you have territory to cover. Vibrant purple flowers adorn masses of foliage and to prove the point, last summer it billowed over the edge of a large cedar container smack in the center of Philadelphia at the Pennsylvania Horticultural Society's headquarters in a place where it was hot, hot, hot.

Be on the lookout this season for new verbenas, first for the Temari Series. Vegetatively propagated they are available in whites, blues, reds and pinks. Their habits are cleaner than the old-fashioned trailing forms, the flowers are bigger, there are more of them and they have more vigor. Imagine! *V. 'Mexico'* and *V. 'Diamond's Turmalin'* in particular, showed great heat tolerance at the Penn State Flower Trials and the colors are smashing. Both are red and white bicolors begging to be sampled.

Petunias used to be considered pedestrian but we love the wildly purple and

Sources

A great source is local garden centers where many plants, especially new ones, can be found. Don't be shy, ask for a special plant or an idea for a good alternative.

Catalogs

W. Atlee Burpee & Co.
Warminster, PA 18974
(800) 888-1447 Free catalog

Glasshouse Works
Church Street
Stewart, OH 45778-0097
(740) 662-2142 Catalog \$2

Logee's Greenhouses
141 North Street
Danielson, CT 06239
(860) 774-8038 Catalog \$3

Thompson and Morgan
P.O. Box 1308
Jackson, NJ 08527-0308
(800) 274-7333 Free catalog

Wayside Gardens
Hodges, SC 29695-0001
(800) 845-1124 Free catalog

White Flower Farm
P.O. Box 50
Litchfield, CT 06759-0050
(800) 503-9624 Free catalog

Sources from South Africa

Kirstenbosch Botanical Garden
The Seed Section
Private BAG X7
Claremont 7735, Cape Town
South Africa
+27-21-766-1166
Catalog

Silver Hill Seeds
South African Seed Specialist
P.O. Box 53108
Kenilworth, 7745, Cape Town
South Africa
+27-21-762-4245
Catalog

sprawling small-flowered *Petunia integrifolia*. The current penchant for color has also made the newer *P. 'Purple Wave'* and *P. 'Pink Wave'* popular with their vibrant pink and purple colors, tons of larger flowers and vigorous habits. Whacking it back improves the above but not the newest one,

the *Calibrochoa* hybrids. The *Calibrochoa* is actually a petunia relative, and was released in Europe a few years ago. *Calibrochoa* hybrids go by the trademark name of Million Bells and that is just about what they look like. Millions of flowers seem to cover this ground-hugging annual. *C. 'Trailing Blue'* has purple-blue flowers with yellow centers, *C. 'Trailing Pink'* is a soft lavender-pink also with a yellow center. *C. 'Cherry Pink'* is a vibrant hot-pink, almost red, with a yellow center and creates more of a mound. All are excellent in containers or at the edge of your garden borders. The best part is that deadheading is unnecessary, they are self-cleaning; they are also heavily branched and will not get leggy. What more can you wish for? More space!

References

Penn State Flower Trial
WebSite: garden.cas.psu.edu/garden-index.html

Books

**Annuals for Connoisseurs*, Wayne Winterrowd, Prentice Hall, New York, NY, 1992.

Annual Gardening, June Hutson, Missouri Botanical Garden, Pantheon Books, New York, NY, 1995.

**Rodale's Annual Garden*, Peter Loewer, Rodale Press, Emmaus, PA, 1988.

**The Book of Annuals*, Alfred C. Hottes, A.T. De La Mare Co., Inc., New York, NY, 1937. (PHS Library edition 1928)

*These books and many others under the subject heading of Annuals are available on loan to PHS members from The McLean Library.

Cheryl Lee Monroe is a frequent contributor to *Green Scene*, her most recent article appearing in March 1998. Her first article for *Green Scene* was exactly 10 years ago in the single-subject issue on Annuals. She gardens in Myersville, Maryland.

Cindi Kistler is the annual buyer for J. Franklin Styer Nurseries in Concordville, Pa., where you can be sure to find a great selection of annuals. An avid gardener who enjoys growing annuals and perennials, she gardens in Exton, Pa.

"Taylor" Your Garden for Perfect Vegetables



by Art Wolk

I'm attending my first South Jersey Organic Gardening Club meeting and an elderly, puckish gentleman is showing slides of his yearly gardening activities. Everything is going smoothly until he starts to fumble while looking for a switch on the projector. When someone in the audience calls out, "Put on those glasses of yours, Taylor!" the speaker dons one of his famous gadgets—a pair of glasses with little glowing spotlights attached to the side of each lens. He finds the sought-after switch, and the program proceeds, amid the audience's laughter.

That experience marked the beginning of my acquaintance with Len Taylor, a man more full of life, fun, and the joy of gardening than anyone you or I are ever likely to meet.

Len lives by one simple motto: "Feed the soil, and the soil will feed you!" He's a man of 85 years who has the stamina of someone half that age; a man who built his current home 60 years ago; and, a man who's a vegetarian, growing virtually all the food he eats.

Most important, he's been feeding his soil with organic matter for all of all those 60 years. Just like you or I, the leftover garbage is put down the disposal. But unlike yours or mine, his garbage disposal is in the garden, so the effluent can be caught and returned to the soil.

Len has been gardening in the same spot in Abington, Pennsylvania, for most of his 85 years. After 60 years of surface composting, stepping on his soil is like walking on a sponge. His lifelong love affair with the soil has yielded vegetables that would astound even the most jaded among us.

Any of us who are organic gardeners have heard the mantra a thousand times: Vegetables grown organically

look and taste better than those chemically fertilized. Although there may not be scientific proof about the better taste of organic produce, Len Taylor's vegetables prove what astounding results can be accomplished organically: 15-ft.-tall tomato plants, 5-ft.-tall leeks, and 12-ft.-tall pea vines. His plants dwarf the competition, literally.

What this all means is not just huge plants, but huge yields. He has enough vegetables to feed himself for the year, with plenty left over for his family: seven sons and daughters, 27 grandchildren, and three great-grandchildren.

One very full life

Len is a Renaissance man who revels in the twentieth century. A short history of his life to date reveals his curiosity, intelligence, ingenuity, and resourcefulness, features that all great gardeners have in common.

Born in 1912, he lived his first eight years in Philadelphia on A Street, then moved close to his present home in the Ardsley section of Abington. Back in the 1920s, everyone in his neighborhood gardened, and some Philadelphians had garden lots in the area they visited on weekends.

Len was interested in gardening from the get-go. He learned how to grow plants organically from his parents, who used the manure from their chickens, ducks, and guinea hens for fertilizer.

After finishing eighth grade, Len's father declared high school wouldn't be worth it for him, since he was "a little too stupid anyway!" It didn't take long for Len to prove him wrong.

Len started working at a gas station and immediately



photo by Art Wolk

Sixty years of loving care for his soil shows in the face of Len Taylor: a man more full of life, fun and the joy of gardening than any of us are likely to meet.



The 85-year-old Len shows off the second love of his life and his preferred mode of transportation, his Rebel Honda motorcycle.

showed an exceptional mechanical aptitude. By the age of 16, he had bought his first used motorcycle. It began one of the great loves of his life, and, to this day, it remains his preferred mode of transportation. He recently received a trophy from a motorcycle club for being the oldest, active

How soft is the topsoil? A couple of years ago this octogenarian fell off a 16-ft. ladder while harvesting fruits from his two-story tomato plants. He hit the soft-as-a-mattress ground, suffered no ill effects, and went right back up the ladder.

motorcycle enthusiast.

In 1937, he went to Philadelphia Electric Company to take an aptitude test to become a lineman. But when he arrived, he was told that he couldn't take the test, since only high school graduates could apply.

An angered Taylor bristled at the wasted time, and insisted they at least let him take the test, high school diploma or not. They relented, and he scored highest of the 36 applicants. The president of the company insisted on meeting this self-educated marvel. Needless to say, he was hired and eventually became a supervisor, the highest position available to non-college graduates.

Len supplemented his income for 30 years by photographing weddings on Saturdays. He developed his pictures in the darkroom he built in his basement.

In 1938 Len and his wife Trudy (now deceased) built by hand his current home, a Cape Cod, using blueprints bought for 25

cents from a magazine. The studs in the walls came from discarded cross-arms from Philadelphia Electric utility poles. The entire home cost them only \$2,000 to build.

Over the years he acquired extra lots for a few hundred dollars, so that he could create the vegetable garden of his dreams. In the 1940s he used the extra cross-arms to build his own greenhouse, a structure he still uses to start his seedlings.

The key to Len's success is not only the organic growing techniques he's used during his life, but also the gadgets he's invented to save money and maximize yield. Regardless of your level of expertise, I'm sure that this visit to Len's garden will energize you and give you ideas for producing your own perfect vegetables.

A 60-year love affair with the soil

Starting in 1938, Taylor began gardening at his current home, but with poor results. He didn't have to look far for the cause; the soil was lousy.

So began a lifetime of feeding his soil.

One older couple hired Taylor to wire their home. When he completed the task he asked only for their cows' manure. He also collected leaves from his neighbors and composted them into what he calls "black gold." In addition he's added kitchen scraps (excluding meat) to his soil and shoveled or rototilled them in. In recent years, he's taken to using a garbage disposal located in his garden to grind down his food scraps, with the effluent added to the soil so it can decompose.

Lately, he's ceased scouring the neighborhood for discarded leaves, since



“Taylor” Your Garden

Abington has their own leaf composting facility. Len built his own trailer to haul the material back to his home. In the last year alone, he used about 500 wheelbarrows full of leaf mold in his garden of approximately 8,000 square feet.

After 60 years of loving care, his soil is a soft, black, crumbly mass that begs for roots to enter it. The soft topsoil is approximately two feet higher than it was back in 1938.

How soft is it? A couple of years ago this octogenarian fell off a 16-ft. ladder while harvesting fruits from his two-story tomato plants. He hit the soft-as-a-mattress ground, suffered no ill effects, and went right back up the ladder.

This highly organic soil is a constant work-in-progress, since soil organisms are always at work, breaking it down, until all that's left is carbon dioxide and water. But why all the fuss about organic matter in the first place? Why does it work at all? And, how does it transform a lot from a veritable dustbowl to a Delaware Valley “horn-of-plenty?”

It turns out that there are several reasons.

To understand them, you need look no further than roots. Aside from nutrients, the two things roots seek most are air and water. Too much of either is detrimental to most vegetable plants, so ideally, the soil should be in a dynamic equilibrium so that both are supplied. Organic matter increases the soil's ability to retain water, so it helps plants to survive drought conditions. Organic matter also adds air spaces to the soil, so that even after a moderate rainstorm, there's a ready supply of air.

Regarding nutrients, organic matter supplies nitrogen to the soil. In addition, it opens up the tight plate structure in clay soils to make more mineral nutrients available. Organic matter also absorbs and then releases nutrients to roots through a process called cation exchange.

Finally, organic matter helps buffer the soil against the effects of acid rain. This is especially important since acid soils bind nutrients so that they aren't released to most garden vegetable plants. Organic matter helps keep the soil pH more neutral, making more nutrients available. That's why organic soils don't need as much lime.

All this helps explain Len Taylor's success with vegetables. It also explains why Len rarely needs to add lime to raise the pH of his soil. When he does add lime (about

photos provided by Len Taylor



Len Taylor displays 5-ft.-tall leeks that he started from seed nine months earlier

The most conspicuous features in Len's garden are the many inventions used to spur his plants to greater horticultural glory.

The one in which he takes the greatest pride is his water collection system, which can store up to 500 gallons.

every 3-5 years or when he "happens to think of it") he uses dolomitic limestone, since it has magnesium — an important nutrient for tomatoes.

Aside from organic matter, Taylor adds rock phosphate and green sand to make phosphorous and potassium (respectively) available.

Having such perfect soil not only results in fantastic plant growth, but enables the grower to put plants closer together, which means higher vegetable yields in a small garden area.

Leeks, lettuce, tomatoes and more

Taylor starts all his plants from seed, using his own starter mix composed of 80% leaf mold and 20% sphagnum peat moss. To this mixture he adds varying amounts of lime and raw kelp.

Len purchases inexpensive year-old seeds at Burpee headquarters in Westminster, Pennsylvania. His own germination tests show that vegetable seeds are still viable after a year, so it's worth the wait for the reduced cost.

Leek seeds are sown in January in plastic shoe boxes and then transplanted into separate containers after they're a few inches tall. He uses a stream of water to separate the mass of seedlings without causing injury.

The seedlings are transplanted into the garden in early spring and are planted about 4-in. deep. With leeks, what's wanted is a long, fleshy, white stem. Planting the seedlings deep, helps get this long stem started. But what really helps them turn into 5-ft. gargantuans is the deep organic soil. The bulbous stem penetrates further and further down during the growing season, until harvest time in August, when Len has to dig 12 in. down to reach the end of the bulb. His favorite leek is 'Broad London'.

Len's insulated cold frames allow him to grow lettuce all year. His seed germination

research shows that lettuce seeds respond to a period of cold storage, so he places the seeds in his freezer for at least six weeks before sowing them. He also thinks it's important to use a non-nutritious soil to start lettuce seeds, so the young roots will vigorously grow downward, searching for nutrients. He uses ordinary garden soil (what little he has left!) to start these seeds. His favorite lettuces are 'Royal Oak Leaf', 'Black Seeded Simpson', and any romaine.

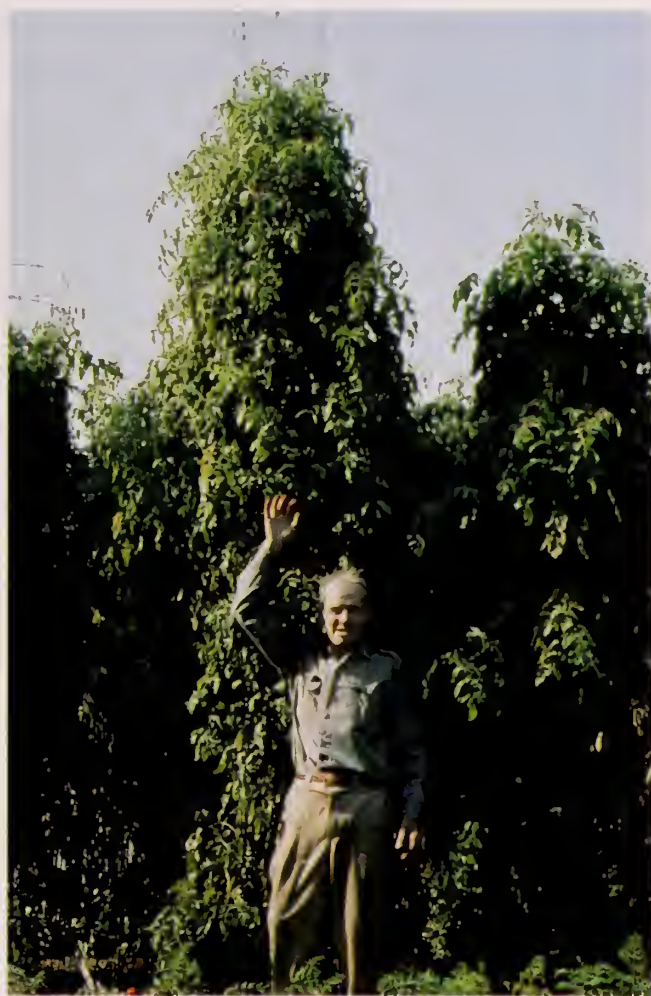
Tomatoes are started March first and go through three transplants before being placed in the garden. His favorite cultivar is the indeterminate (free-branching) 'Delicious'.

After transplanting into the garden, Len erects his tomato cage towers. These are made of three separate 5-ft.-high, 2-ft.-wide cages made of rebar (concrete reinforcing material) that are tied together, end-to-end, to make a 15-ft.-high tower. He braces the structure by wiring it to 6-ft. pipes that are pounded two feet into the ground.

By late summer the tomato plants make it to the top of the towers and are Len's great pride and joy. He particularly likes it when the cars stop so the passengers can gawk at the giant plants.

Another favorite of Taylor's are peas. He starts seed indoors between moistened paper towels, and transplants them outdoors as early as possible, usually by mid-March. He lets them grow up a mesh that's hung between 8-ft. poles. By early summer, the pea vines reach 12 ft. tall and are loaded with pods.

Pepper seeds are sown by mid-February in containers that are placed above a heat source of incandescent bulbs and food warming trays. This germination system,



Taylor's towering tomato plants top out at 15 ft. and are the result of 60 years of meticulous care for his soil.

invented by Len, raises the soil temperature to an ideal 78°. Once transplanted into the garden his guiding principal for a good yield is to go light on the nitrogen fertilizer, or you'll get a huge plant with few fruits. Len lets all his peppers ripen completely so he gets the maximum amount of Vitamin C. His favorite is hybrid 'Blockbuster'.

Corn is one of Len's favorite vegetables and he eats it raw. He grows it in 4-ft. x 4-ft. beds that contain 32 plants. That works out to approximately one plant every 8 1/2 in. Even so, his perfect soil gives him a yield of two ears per plant, or 64 ears in 16 square feet! He used to have twice the amount of plants in these beds, which would then yield 128 ears, but Len found he couldn't reach the overcrowded interior plants.

Corn seeds are started April 1st indoors

"Taylor" Your Garden

Len Taylor harvests mid-winter lettuce from a raised bed. PVC pipes hold up the polyethylene plastic, while thermostatically controlled 100-watt bulbs at each end keep the temperature above 40°. Note insulation on exterior of frame.



and transplanted into outdoor beds shortly thereafter. He uses a 4-ft. x 4-ft. frame, divided into 12-in. squares, for accurate planting. PVC pipes attached to the frame hold polyethylene above the plants in early spring, to keep them warm. In mid-May, he removes the frame and plastic cover. Len prevents wind damage to his corn plants by planting them in trenches, 8-12 in. deep, and covering the lower stems as the plants increase in size. He says he's never had corn plants topple during summer thunderstorms when he's used this precaution. Len's favorite corn hybrids are 'Silver Queen' and 'Early Xtra Sweet', and he recommends eating the nutritious silks as well as the ears.

A gaggle of gadgets

Aside from the perfect soil, the most conspicuous features in Len's garden are the many inventions used to spur his plants to greater horticultural glory.

The one in which he takes the greatest pride is his water collection system, which can store up to 500 gallons. He collects every drop from the roof of his home into huge, interconnected barrels. After only one-half inch of rain, every barrel is filled. Using a sump pump and a hose, he uses this water for his vegetable plants. Len never uses tap water, which he believes would be detrimental to his plants.

Taylor uses raised, insulated beds to grow lettuce and carrots all winter long. He places hoops of clear plastic over the beds, supported by loops of PVC pipe. Inside the plastic, thermostatically controlled 100-watt bulbs, two per bed, are set to come on when the temperatures goes below 40°. I visited him one cold day in February and found these raised beds crammed full of lettuce and carrots, just waiting to be harvested.

His cold frames, marvels of invention and design, are 12-ft. long by 2-ft. wide and have sashes easily raised and lowered using a pulley system. The back of the frames are against a concrete wall that acts as a thermal mass. He paints the wall black to collect the sun's heat. Using these frames, which contain no supplemental heat source, Taylor is able to grow lettuce all winter long, regardless of outdoor temperature.

An organic gardener's secret of longevity

Aside from a strict vegetarian diet that includes not just vegetables and fruits, but also chickweed, what else accounts for Len Taylor's vitality? In his own words, you can live longer by "appreciating every single day, each sunrise and sunset, and taking 'worriment' away from yourself." He suggests that you don't share woes with your family at mealtimes, but have everyone

tell a joke.

There's a big part of Len Taylor that makes you want to get as close as you can to him, to let his magic rub off onto you. He seems to laugh at the transitory nature of life itself, and he'll joke about subjects that others would consider macabre.

This zealous organic gardener delights in telling anyone about the owner of a cemetery who called him when he turned 80. The man wanted to sell Len a plot in his perfectly manicured, weed-free, "final resting place." Len turned him down flat, telling the owner that he "didn't want herbicides and pesticides seeping into [his] bones!"

So from now on, whenever I muse on what I hope life will be like for me when I reach 80, I'll think of Len Taylor: A man who always takes one day at a time, who's an eternal optimist, and who hasn't lost the sparkle in his eyes that was probably there over 85 years ago.

Art Wolk writes and lectures on a variety of gardening topics. He's manager of the Winslow Township Branch Library, where he can be found spending too much time in the garden books section. He'd like to thank his fourth grade teacher, Marilyn Popp, for first introducing him to the magic of gardening.

Michael Howell, who grew his first plants (zinnias) at age nine under the tutelage of his neighbor, Mrs. Percival, now grows thousands of orchids in a greenhouse larger than his home.



GARDENING MENTORS

 by Adam Levine

15

Six gardeners tell how mentors helped to launch them in the garden. The author asks: Have you thanked a mentor lately?

The man I have to thank, or blame, for my current obsession with horticulture was an older neighbor in West Philadelphia, Eugene E. Smith. Gene taught me the names of all the flowers in his garden. He consulted with me on my first seed order, and helped me to sow them. He gently coached me as I planted my first garden bed in the community garden he had convinced me to take over after the previous gardener went blind.

It's ironic that one of the first plants Gene gave me was a forget-me-not, because soon after I met him, he died.

Since Gene I've found other gardening mentors, who have taught me other things. But I think many of us reserve a special place in our hearts for the person who got us started, who encouraged us to keep going when we might have quit, who transmitted their love of plants to us.

There are as many stories about gardening mentors as there are gardeners. The following are just a few of them.

Michael Howell

Most people wouldn't consider blue-collar Gloucester City, along the Delaware River in southern New Jersey, to be a hotbed of horticultural activity. But to hear horticulturist Michael Howell, 41, talk about his childhood there, he was surrounded by gardeners. And being an inquisitive child he managed to learn from them all.

Mrs. Colletti grew 8-ft.-tall tomato plants from seeds she saved from year to year, and she taught Michael that not all seeds come out of a paper pack. Mrs. Rowe grew a double orange daylily that he admired, and she thrilled him when she gave him a piece for his garden. Mrs. Percival's garden next door included marigolds, holly-

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hocks, roses and what she called "zee-nias." Zinnias were one of the first plants Howell grew, when he was nine, and decades later he still grows them, and still gets a kick out of watching them come into bud.

The most influential of Michael's gardening neighbors, Pat Fitzwater, had a wonderful garden at the end of the block. She became Howell's main mentor, as well as a good friend and confidante. She gave him plants for his own garden, and took him on buying trips to area nurseries. Each year they'd make a late-winter pilgrimage across the Delaware, to the Philadelphia Flower Show. She brought him to the garden of her cleaning lady, Delma, where he saw, for the first time, a garden with interesting flowers, perennials and biennials, along with more familiar annuals.

Fitzwater taught Howell many things about gardening: about cultivars, and the usefulness of Latin names; how to prune roses — and most important, how to enjoy gardening. "For Pat, gardening was never a chore," Howell says. "She was always happy when she was doing it."

By junior high, Howell was already fretting over where to place the plants in his garden, and he was secretly reconstructing other people's flower arrangements. His father bought him mail-order plants if he agreed to care for them, and that's how he got strawberries, lilacs, roses and gladiolus. "Gladiolus became a big deal," he says, "planting them out, then digging up the corms and drying them. I liked the planning part of it. It gave me a feeling, I wouldn't say of control, but that I had a part in it."

After high school, Howell attended Rutgers University, where he received a B.S. degree in Plant Science. From there he headed to North Carolina for graduate studies that he never completed, leaving academia to enter horticultural work fulltime. For the past 12 years he has been proprietor of Flora Design Associates, a company that designs, installs and maintains gardens. He also operates the Flora Design Gallery in Kimberton, Chester County, which sells fine crafts, orchids, unique gifts, and other plants. An avid orchid grower, Howell grows thousands of plants in a greenhouse larger than the home attached to it.

Howell found other mentors as his interests expanded, including Doug Ruhren, a horticulturist in North Carolina who taught him many things about plants and design,



Top: Robyn Josephs (right), holding her son Ross, six months old, with her late mentor Martha O'Conlon, at the Unitarian-Universalist House in 1983. Robyn started as a grasscutter and under Martha's guidance became a "lady's gardener." **Bottom:** Robyn Josephs now has her own greenhouse (1998).

and his neighbor Joanna Reed.

"Joanna taught me how to use large masses of things, colonies of plants as opposed to this little gem or that little gem," Howell says. "I have five acres, two of which I garden intensively, so a couple of plants here and a couple of plants there just doesn't cut it."

Through the years, he kept up his friendship with Pat Fitzwater, though as time went by their roles were reversed, and he became her gardening mentor. When he bought the land on which he now lives, he and Pat talked about the possibility of her moving there when she retired.

But before it could happen, Pat died of cancer.

Howell is still trying to forgive her, for leaving too soon.

Robyn Josephs

In the early 1970s Robyn Josephs was an experienced grasscutter but a novice gardener, helping to restore the grounds of the then-derelict Ebenezer Maxwell Mansion in Philadelphia's Germantown section. For inspiration, she needed to look no further than the grounds of the neighboring Unitarian-Universalist House. There she met Martha O'Conlon, a resident of the house who was overseer of a beautiful

ornamental garden of several acres.

O'Conlon was a graduate of the Women's School for Horticulture (now Temple University's Ambler Campus). Before retiring she'd been a "lady's gardener," as she called it — a woman doing gardening work for other women, which was a rarity years ago. O'Conlon convinced the 20-year-old Josephs that she could do the same, and recommended her for a number of jobs.

"As a lady's gardener," Josephs says, "you came, you discussed the plants and where you were going to put them. Of course, when they went inside you did whatever you wanted — but they gave you tea, they remembered your birthday. In some cases you even became part of the family. It was a far different way of gardening from planting a yew bush and trimming the grass, which is all I'd been doing before." After meeting O'Conlon, Josephs says she never cut grass again.

Over the years, O'Conlon taught Josephs about seed-starting and other methods of propagation. She introduced the younger woman to many plants, including perennials, which were uncommon at the time.

"I easily could have become a plant snob," recalls Josephs, now 46. "I met all the right people. But it would have become

Beyond horticulture, Grove's manner in the garden taught Iris Brown the necessity of good public relations, in a city where vandalism of public spaces can often be devastating.

too much work, so I would have given it up." O'Conlon also fought against such snobbery. "She taught me that any well-grown plant is a wonderful plant," Josephs says. "A beautiful bed of petunias is nicer than a poorly tended garden of exotic plants."

Josephs worked as a gardener for 13 years, until her first son was born. By then she had moved out of Philadelphia, to the suburb of Rose Valley, and decided to get out of the business. "I was trying to make my own life, my own garden," she says.

That garden, covering about three-quarters of an acre, is both utilitarian and ornamental, with perennial and shrub borders around the house and a large food garden in the sunny back yard. In a good year — meaning one with adequate rainfall — the garden produces about 80% of the fruit and vegetables the family of five requires. Everyone pitches in at harvest time, canning and drying and freezing the bounty. A small solar greenhouse provides fresh greens year-round.

O'Conlon visited the Rose Valley spread about 10 years ago, Josephs recalls. "She was impressed with what I'd done, but she thought it was too big for me to take care of with all these children, and that I should get somebody to help me."

Josephs subsequently fell out of touch with her mentor, and the day before our interview she called the Unitarian-Universalist House, "to see if Martha was still alive."

She wasn't; she had died two years ago. But bits of O'Conlon still thrive in the many special plants she gave Josephs for her garden. One was a dwarf crape myrtle, a plant O'Conlon loved.

Says Josephs, "Every time it comes into bloom, I think of her."

Andrew Bunting

By the time he met his main gardening mentor, Andrew Bunting, 33, had already inherited a love of plants and gardening. Now curator of the Scott Arboretum at Swarthmore College, Bunting spent many summers as a child on the Nebraska farm of his grandfather, George Bunting, who was very much a gentleman but in no way a "gentleman farmer." George Bunting's 160 acres, besides providing a cash crop of grain, provided all the food he and his family needed to eat, a self-sufficiency that greatly impressed his grandson. "My

grandfather didn't go to a supermarket until he was 60," Bunting proudly recalls.

At home, Bunting enjoyed helping his mother in her flower and vegetable beds. During his high school years in Manhattan, Illinois, when his mother became too busy to garden, she let him plant the sunny front yard in vegetables. "In a conservative mid-western town," Bunting says, "that was not really the thing to do." The garden was about 25 feet square, and the young gardener kept it so well manicured that neighbors had nothing to complain about.

After taking horticulture classes in high school, Bunting entered the horticultural program at Joliet Junior College. During an internship in his first year there, he worked at the Morton Arboretum (Lisle, Ill.), where the curator was Ray Schulenberg.

"It's a name many people have never heard of," Bunting says. "He didn't spend his life cranking out books, he didn't go on plant collecting trips all over the world, he wasn't interested in lecturing. He was interested in doing his job, which was teaching, and maintaining one of the best woody plant collections in the world." Even now Bunting can say of Schulenberg, "He was the most knowledgeable plantsman I've ever met, and I've met a lot of people."

Schulenberg's professional example convinced Bunting to pursue a career in public horticulture. "He inspired me to learn about plants, and opened my eyes to what a botanic garden or arboretum does." After

leaving the junior college, Bunting got a B.S. degree from Southern Illinois University. He then worked in various places, including England and New Zealand, before coming to Scott as curator five years ago.

Though he hasn't seen Schulenberg for years, Bunting still remembers the plant walks his mentor led every Tuesday. "He was always quizzing you. He thought it was important to know the plants around you: common name, scientific name, family name. He'd bark at you, in a joking way, never in a mean-spirited way, because he knew if you were interested, he could drill it into you by repetition.

Schulenberg was a meticulous record-keeper, a lesson Bunting adopted from his mentor, an important part of a curator's job. "Unless you have a good way of keeping track of everything," Bunting says, "the institution is not going to shine, it's not going to stand out as one of the better collections."

Bunting's passion is for new plants, and during his tenure as curator 5,000 woody specimens have been added to the collection, which now includes 25,000 plants representing 3,000 species, varieties and cultivars.

Even with all these additions, Bunting admits that, like most plantlovers, "I still have an ongoing list of plants that I covet."

Iris Brown

"I identify myself as a gardener; it's what gives me the most satisfaction," says Iris



Andrew Bunting, curator of the Scott Arboretum at Swarthmore College, examines an oriental spruce, *Picea orientalis* 'Gowdy', one of the 25,000 plants on the grounds.

photo by Adam Levine

GARDENING MENTORS

Brown, 51, who coordinates after-school programs and seven community gardens for the Norris Square Neighborhood Project, a community development organization in North Philadelphia.

But Brown never would have become a gardener 10 years ago if she hadn't met Peter Grove. "No way," she says. "Then I wasn't interested. I was happy to open a can of corn; I could care less where it came from."

Brown's education began when Grove was hired as the new director at the Norris Square Neighborhood Project. Grove did far more than his job required: fixing the roof as well as keeping the books, writing grant proposals and patching the plumbing, teaching classes, starting a garden. Brown, the project's newest employee, was amazed by Grove's hyperactivity, and to learn how he did all these things she followed him everywhere, like a shadow.

For a time she was as mute as a shadow, too, since Grove, a transplanted Englishman, spoke no Spanish, and Brown spoke no English. She actually knew English, having studied it in school during her childhood in the small town of Loiza near San Juan, Puerto Rico. But since moving to the United States 20 years before, she had never had a chance to practice the language. She thought people would laugh at her mistakes and her accent if she tried.

"I wanted to say something, I thought that I could, but I was very nervous," she says. "My heart wanted to come out before my words."

Slowly, she overcame her fear of speaking her second language - with Grove, and then with others. The first time she spoke English at a public meeting of the Pennsylvania Horticultural Society's Philadelphia Green program, she remembers, "Nobody looked at me, nobody pinched me, so I said, 'Okay, next time I'll say a little bit more.'" Gradually, Brown convinced herself that if people were interested in what she had to say, they would take the time to understand her. She now speaks English well enough to have taken college courses and lectured before a college class.

Once she began asking questions, it became easier for Brown to pick up gardening basics from Grove. But these basics, as they so often are, were just the beginning. Beyond horticulture, Grove's manner in the garden taught her the neces-



Iris Brown (right) in Las Parcelas, the largest of the community gardens she coordinates in Philadelphia's Norris Square neighborhood. The initially shy Iris graduated from following her mentor Peter Grove around for several years, having never gardened, 'til now she oversees seven gardens.

sity of good public relations, in a city where vandalism of public spaces can often be devastating.

"People would stop and see the beauty of the gardens, and Peter would always share something with them - cuttings and plants and flowers and vegetables," Brown says. "He was teaching other people about plants and also preserving the gardens, because if you give a person something, they'll respect you."

Expanding on this idea of respect, Brown realized that the gardens might also help give people in the mostly poor Puerto Rican neighborhood a clearer sense of their history, a better sense of themselves. The gardens could offer a dual harvest: food for the body, and self-respect for the soul. The original community gardeners in Norris Square nicknamed themselves "Grupa Motivos," roughly translated as "The Motivators." They were all beginners 10 years ago; now they form the backbone of a widespread effort that, with the support of Philadelphia Green, has dotted the entire neighborhood with gardens.

The seven gardens that Brown oversees have themes based on different aspects of Puerto Rican culture. **Las Parcelas** (which, in Puerto Rico, are the plots of land the government gives residents to build houses on) is the largest garden, covering half a square block. Brown describes it as a peaceful place that functions as an open-air community center, with people gathering to

listen to music, play congas and maracas, cook, play dominoes and checkers and, of course, tend their garden plots.

The garden called **Raices** ("Roots") includes a mural that teaches visitors about Puerto Rican history, and an "alphabet garden" where pieces of that history corresponding to each letter of the alphabet are painted on wooden signs. In **El Batey** (a place where natives in Puerto Rico gather for ceremonies such as weddings), the garden is decorated with displays depicting the country's indigenous people, and native root vegetables such as yucca and sweet potatoes are grown.

"We have to demonstrate that not everybody here is into drugs and prostitution — it's not true, there are good families here," Brown says of the neighborhood in which she has lived for 20 years. "The [Pennsylvania] Horticultural Society gave us a chance to prove that to ourselves, to our children, to the people who thought we couldn't do it." In 1993 Philadelphia Green honored the neighborhood by naming it a "Green Countrie Towne," which refers to William Penn's original plan for a green Philadelphia.

Peter Grove left Norris Square a number of years ago, and Brown hasn't seen him since 1995. But he taught her so many different things that he often comes to mind. "Peter's shoes, they're size 13," Brown says; and when asked if those shoes are hard to fill, she shakes her head and says,



Frank Hayes prunes a Japanese holly (*Ilex crenata*). Frank says his mentor Al Vick taught him to prune with Felco pruners no matter how big the job.

"Not in my lifetime."

Though one suspects that in her own way, with her own small feet, she has already filled them.

Frank Hayes

When Vick's Wildgardens in Gladwyne, Pa., closed down in 1989, Frank Hayes says, "It was like somebody cut off my right arm. Everybody who worked there — it was like a family.

Hayes, 35, went to work for Vick's straight out of high school in 1981. He knew he liked flowers — their fragrances and colors — and he enjoyed being outdoors. But his only horticultural experience up until then had been helping his grandfather with various gardening jobs, in exchange for a free lunch.

The job at Vick's paid more serious money and was more serious work. For years Vick's was one of the preeminent landscape nurseries in the Delaware Valley. Hayes says, "I had two great teachers in owner Al Vick and head nurseryman Steve Horvath who, together, had a hundred years of experience."

Unlike many of today's "blacktop nurseries," as Hayes calls them — where plants sit in pots or burlap in settings resembling horticultural parking lots — Vick's grew many of its own trees and shrubs in the ground, digging them for each specific job. All new employees at Vick's were first put to work in this nursery, Hayes says, learn-

ing the basics in a hands-on way.

Hayes remembers nursery manager Horvath as a "walking encyclopedia, the backbone of the business." Horvath taught Hayes many things, from the right way to step on a shovel to more technical information such as the various types of root balls to dig for different trees. Horvath also taught him basic propagation and proper pruning techniques, and Hayes still cherishes the pair of Felco No. 8 hand pruners he purchased that first year on the job at Vick's.

After six months training Hayes joined one of the landscape crews, and two years later, he was made a crew foreman. "It's hard to put into words, what I learned," he says. "When you go to a job, you don't want to dictate to what's around you, you want to blend what you do into the landscape." From Al Vick, who was the designer and salesman of the company, he learned how to place rocks with the strata running horizontally, and the principle of grouping plants in odd numbers. He learned bed preparation, and how to check soil drainage. He became an expert at stonework, building waterfalls, steps and stone retaining walls.

"Al Vick was meticulous," Hayes says. "He wanted things done right. For example, he never liked anything pruned formally. He'd say, 'I don't care how big the job is, you're pruning with Felcos.' We didn't have any hedge clippers: if it was a 100-ft.

hedge, we did it by hand. And we didn't have blowers; we had to rake everything up by hand. He was so worried about damaging people's lawns we moved huge trees by hand, in a ball cart. He was very old-fashioned, which was good, because things were done correctly."

Since leaving Vick's Hayes has worked a number of jobs, including a stint as supervisor of grounds at the Annenberg Estate in Wynnewood, Pa. Currently he works on the groundskeeping staff of Villanova University. But he has yet to find another job as satisfying as the one he had at Vick's, one in which he feels free to use all the things he learned there.

In some ways Hayes is as old-fashioned as his old boss, Al Vick, and readily admits that he sometimes feels like a "dinosaur."

"It's gotten to the point where everything's got to be done in a rush," he says. "To me that's bad practice. If you take the time and effort, 95% of the time the plants are going to thrive. That's what I was taught. And those of us taught the right way, we have to keep on doing it."

Completing the Cycle

If I could see into the brain of a gardener, it wouldn't surprise me if I found a mental version of a compost pile. Information, the raw material, is always being added to the pile, since even the most experienced gardener never stops learning. That data is turned over and sifted and mixed with things the gardener already knows until it breaks down and becomes something richer, something new.

Then comes the most important part of the composting process: giving it back.

But how many of us, while spreading this richness, ever remember to thank the source, our mentors?

If that gratitude is never adequately expressed in words, perhaps it takes the form of emulation. Because if they stick at it long enough, gardeners who once knew nothing invariably become mentors themselves, spreading their knowledge like compost, nurturing and enriching the minds of the next generation.

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Adam Levine writes, gardens and grows fancy leaf pelargoniums in Rose Valley, Pennsylvania. He still tends flowers from his first mentor, Gene Smith, in the award-winning Spruce Hill Garden in West Philadelphia.

Gardening in a Dry Woodland



by Beverly Fitts

In June, *Mahonia bealei* displays burnished foliage and blue grape-like berries. People and wildlife enjoy this striking shrub.

Huge oak, hickory and beech trees on a steep, north-facing slope captured our affections immediately. The land reminded my husband, Don, of his native New Hampshire and reminded me of childhood walks in the woodlands of Pennypack Park. Dry shade conditions would have been obvious to a more seasoned gardener, but we were just married and had little gardening experience.

The house on one acre in Lower Merion had been empty for several months. It was November and leaves were knee deep. Still young, full of energy, and a city girl, I thought raking leaves would be fun. I had no idea how important they would become to me in the future.

Twenty years passed before I began to turn that rough wood with dense wild raspberry thickets and poison ivy into a woodland garden. We had been busy pursuing our careers and raising children, who liked to sled down the hill and build forts hidden in the woods.

During those busy years, however, I developed a vision of the garden-to-be. It would have flower beds in the few sunny areas and a peaceful woodland strolling garden around the lower perimeter. The entire property would have an informal cottage look, harmonizing with the pseudo-farmhouse style of our 1950 red brick house. The repetition of hollies, rhododendrons and azaleas would provide unity throughout the garden, while pink in all its variations would be the dominant color. Pink is gentle and restful on the eyes, and I envisioned a peaceful, serene garden that contrasted with our busy lives.

I began the woodland garden 13 years ago. Pathways were made first, and since I did all the work myself, the method had to be easy. I lined the path area with several layers of newspaper, then covered it with three inches of wood chips. Newspapers were plentiful and wood chips free from our arborist. It was easy, inexpensive and it worked.

The first heavy rain, however, washed the wood chips down the hill. I quickly edged the path with six-inch logs to hold the chips in place until plants could do the



The path leading from the terrace into a moist part of the woodland is surrounded by purple creeping phlox (*Phlox stolonifera*), white foamflower (*Tiarella cordifolia*), and pink wild geranium (*Geranium maculatum*).

Dry shade occurs under trees, especially beech, maple and conifers, on north-facing slopes and under the eaves of north-facing buildings. All of these situations exist in my garden, many in combination, which only makes matters worse.

job instead.

The dry shade conditions made themselves known when I began to plant. A neighbor gave me some variegated goutweed and assured me it would grow. When it didn't, I knew I had problems.

I learned that dry shade occurs under trees, especially beech, maple and conifers, on north-facing slopes and under the eaves of north-facing buildings. All of these situations exist in my garden, many in combination, which only makes matters worse.

While soil preparation is important to successful gardening, it is critical in dry shade. Loose soil absorbs water quickly, so I amended the soil until it was friable and rich with humus. Now, rain can reach the roots before it runs down the hill. A mixture of two parts humus, one part sand, and one part loam has worked well for me.

When the soil was ready, I started planting. Part of the fun of gardening is discovering where each plant thrives, but experimenting can be expensive. I had to be realistic. First I made a list of plants that tolerate dry shade. From the list I selected various plant combinations based on form, texture and color. I wanted to include broad, lacy and blade foliage in each grouping and tried to repeat a flower color in the foliage of at least one plant. My goal was continuous interest from texture, form and foliage color. Flowers then would become an extra but constant delight.

For example, one of my darkest and driest areas is approached through an alley of dwarf boxwood. Steps lead down to a sunken flagstone patio beneath a 100-ft. American beech. The beech rises through the floor of the terrace and spreads its canopy over the oaks

and hemlocks that grow in the raised beds surrounding it. For the dry full shade over the roots of the hemlocks, I chose *Kerria japonica*.

Kerria seems to survive anywhere. It's about six feet high and wide, has finely textured foliage and an arching habit much like forsythia. The species has single, sunny-yellow flowers in May and bright green twigs all year; it looks natural and cheerful in dark woodlands. I added *Aucuba japonica* 'Gold Dust', which has yellow spotted foliage; *Hosta* 'August Moon' for its broad yellow leaves; lady ferns for their lacy texture and wood poppy (*Stylophorum diphyllum*) for its yellow flowers. At one time I used *K. japonica* 'Variegata' in the garden. I liked its green and white variegated foliage, and the deer adored it; every spring they ate it to the ground. So I gave the plant to a neighbor a block away, where the deer preferred heuchera and left *kerria* untouched.



Top left: A path meanders through the driest part of the garden, where *Hosta* 'August Moon', Christmas fern, arum (*Arum italicum* 'Marmoratum'), white hellebores, great solomon's seal (*Polygonatum commutatum*), chartreuse *Lamium maculatum* 'Beedham's White', and variegated ribbon grass (*Phalaris arundinacea* 'Picta') create an interesting colorful picture in full shade. **Top right:** The evergreen foliage of *Arum italicum* 'Marmoratum' is up to 12" long and 8" wide. Its creamy variegation and bold texture combine beautifully with *Helleborus foetidus*; it's excellent for flower arrangements. **Bottom:** *Trillium luteum* punctuates the creeping phlox (*Phlox stolonifera* 'Sherwood Purple'), which carpets the woodland floor.

Shrubs for Dry Shade

Aucuba japonica
Berberis thunbergii 'Aurea'
Cercis canadensis
Clethra acuminata
Clethra alnifolia
Elaeagnus pungens
Euonymus alata 'Compactus'
Euonymus fortunei
Forsythia xintermedia
Hypericum 'Hidcote'
Ilex aquifolium
Jasminum nudiflorum
Kerria japonica
Leucothoe fontanesiana
Ligustrum spp.
Lindera benzoin
Mahonia spp.
Microbiota decussata
Nandina domestica
Rhodotypos scandens
Sarcococca hookeriana var. *humilis*
Skimmia japonica
Stephanandra incisa 'Crispa'
Symphoricarpos spp.
Taxus baccata
Viburnum prunifolium

Perennials for Dry Shade

Arum italicum 'Marmoratum'
Aster cordifolius
A. divaricatus
Begonia grandis
Brunnera macrophylla
Corydalis lutea
Cyclamen hederifolium
Disporum flavum
Disporum sessile 'Variegatum'
Dryopteris filix-mas
Epimedium xversicolor
 'Sulphureum'
Eupatorium coelestinum
Eupatorium rugosum
Euphorbia robbiae
Galium odoratum
Geranium macrorrhizum
Geranium phaeum
Hedera helix
Helleborus foetidus
Heuchera spp.
Hosta spp.
Iris foetidissima
Lamium galeobdolon 'Variegata'
Lunaria annua
Lysimachia nummularia 'Aurea'
Phalaris arundinacea 'Picta'
Podophyllum peltatum
Polygonatum spp.
Polystichum acrostictoides
Prunella spp.
Pulmonaria spp.
Saxifraga virginiana
Symphytum grandiflorum
Tradescantia virginiana
Vinca minor 'Bowles's Variety'
Viola labradorica

From the sunken woodland patio, the path steps down into borders of American and European wildflowers. The forest floor is carpeted with foamflower (*Tiarella cordifolia*), lungwort (*Pulmonaria saccharata*) and creeping phlox (*Phlox stolonifera*), while trilliums and arisaemas interrupt their masses. Hellebores, gingers (*Asarum* spp.) and Christmas ferns form large colonies under native rhododendrons in this moist part of the garden. Soon, however, the hill rises steeply ahead and the soil becomes dry once again. There, on the northern slope over the roots of oak and hickory, I planted the shrub that most excites our visitors: *Mahonia bealei*.

The leatherleaf mahonia has a sculptural presence with coarse holly-like leaves and angular branches. Some of the evergreen foliage is burnished by the winter sun and remains a vibrant orange for many months.

Arum italicum 'Marmoratum'; the stinking hellebore (*Helleborus foetidus*); Christmas fern, winter aconites and snowdrops are charming companions. I look forward to this cheerful combination every winter; it inspires hope on dreary, cold days.

In spring, clusters of primrose-yellow flowers appear on the mahonia and are followed by captivating bunches of purple, grape-like fruit, which the birds relish. Its form, foliage, flowers and subsequent berries make a dramatic and colorful woodland shrub the entire year.

Once these and other plants were placed (see the accompanying chart), the maintenance began. Plants in dry shade grow slowly; ideally they prefer more light and moisture. To increase the light, I keep trees and shrubs thinned out and limbed up. To increase the moisture, I mulch.

Mulch is important to successful dry

shade gardening, because it reduces evaporation and decomposes to enrich the soil. Chopped leaves are my preferred mulch. They're an attractive and appropriate top dressing for woodlands, environmentally sound and free. Unfortunately, they are also back-breaking, shoulder-aching work. In fall my husband and I rake our leaves and put them through a large grinder, or use the lawn mower with a leaf mulching attachment and bagger. Then, we store the ground leaves in an 8-ft. x 8-ft. bin. In early winter, I spread three inches of mulch onto the woodland floor. The leaves keep the soil cold and prevent heaving during warm spells. Mulch also reduces the number of weeds and seedlings in the spring, and retains moisture in the summer.

Even though decomposing leaves enrich the soil, I apply a light sprinkling of 5-10-5 each spring. I have found that the addition of fertilizer benefits the plants; perhaps it compensates for the aggressive feeding of the tree roots.

In summer, I deadhead and groom my perennials. Deadheading prolongs the bloom of plants such as *Dicentra eximia* (bleedingheart) and *Stylophorum diphyllum* (woodpoppy). It also keeps them looking fresh. While I am removing the spent blossoms, I cut out any unsightly foliage, check for insects and diseases, and add more mulch as needed. Proper maintenance keeps the plants healthy and looking good all season, so I find it worth my effort. Besides, I enjoy being in my garden and working with my plants. The serene setting provides a sense of tranquility and repose.

Many years passed before my early vision was realized. There were successes and failures. Some plants didn't bloom in the full shade of our north-facing woodland, and yellow has replaced pink as the dominant color, because it's brighter and cheerier in dark areas. Yet 13 years after the first path was laid, I am still experimenting, refining combinations and enjoying every minute of it.

Creating a garden in my dry woodland has been both a delight and a challenge, and anyone can have a garden in these conditions with careful planning. Have a vision and make lists. Use various plant forms, textures and foliage colors. Plant wisely and maintain with tender, loving care. Then, a beautiful garden, even in dry shade, can be a constant pleasure for you, as it is for me.

Beverly Fitts is a garden lecturer, design consultant, and president of the Hardy Plant Society/Mid-Atlantic Group.

THE McLEAN LIBRARY CULTIVATES *PHS's 171-year old Library flowers in it*



by Richard L. Bitner

Some PHS members of long-standing aren't aware of the tremendous resources that The McLean Library offers to the gardeners of the Delaware Valley. Indeed to the horticulturally connected anywhere in the country. Make that anywhere in cyberspace. Check us out.

Why does PHS have a library, anyway?

When asked, librarian Janet Evans explains: "Learning to garden is like learning to cook. If we're lucky, we have a mother or grandmother or someone close by who is a great cook, or a great gardener, who reveals the secrets of the craft. But most of us have to go beyond this circle to learn. We go to school or we attend lectures, and we experiment on our own. Or, we mingle with other cooks at places like the Book and the Cook or with other gardeners at places like the Philadelphia Flower Show. Or, we read books by the great cooks (or the great gardeners) and absorb their teachings. That's what the Society's Library is: the collective wisdom of generations of gardeners and designers and horticulturists and artists who are ready to teach those who will seek them out. People who love to garden also love to read about gardening, just as people who love to cook derive pleasure from reading their favorite food writers. When it comes to picking a shrub to plant in your yard, who's the expert - the clerk at the garden center? Or William Frederick? (Open his *100 Great Garden Plants* and find out). When you want to learn about color and design in the herbaceous border, why not read what Louise Beebe Wilder has to say. Or, when you're just looking for excellent gardening writing, why not turn to Allen Lacy or Henry Mitchell or any of dozens of writers in the library's stacks. That's what people have been doing since this venture started in 1827. And they're still using the library in this way. In fact, it's now used more than ever. So, that's why we have a library."

photo by John C. Gouker



No more rubber stamps. Jane Alling, assistant librarian, checks a book for a member using the newly installed computer library system.

To appreciate the depth and focus of the Library collection, go back to the horticultural history of the area. Gardening is a long-standing tradition in the Delaware Valley, which is rich in both public and private gardens. Philadelphia was, after all, our nation's early cultural and scientific center. "It was only natural that Jefferson

GARDENERS

new home

sent Merriwether Lewis to Philadelphia to be trained and outfitted for the journey." wrote garden historian Elizabeth P. McLean in these pages earlier this year*. "Then the largest city in North America, Philadelphia was also its scientific capital. It was also the home of the American Philosophical Society, America's oldest scientific organization." When you combine the strong, historical interest in gardening and natural history with this atmosphere of inquiry, it's no surprise that the first American publication devoted expressly to trees and shrubs, Humphry Marshall's *Arbustum Americanum* was printed in 1785 and William Bartram's *Travels* was published here in 1791. The first American botany textbook *Elements of Botany* was published by Benjamin Smith Barton in Philadelphia in 1803. The first gardening "how-to" books for the colonies, Bernard M'Mahon's *American Gardener's Calendar* was distributed here starting in 1806 and *A View on the Cultivation of Fruit Trees in Philadelphia* by the father of American Pomology, William Coxe, appeared in 1817.

Several of these writers were Quakers, a group that included many farmers, naturalists and botanists who not only practiced the art and science of horticulture but who also wrote their observations in diaries, field notebooks, correspondence, books and papers.



A landscape architect from a university in Ontario, Canada, called trying to track down biographical information on a 19th century Philadelphia landscape gardener who designed a park there . . .

This inquiry gets picked up by Elinor Goff, library aide who is credited with an astounding memory for details. From notes she had made some nine years earlier and just happened to have in her purse, an

*Lewis & Clark, *The Philadelphia Story* by Elizabeth P. McLean, *Green Scene*, January, 1998, pages 9-12.

archive in itself, she finds references to the designer in a book in the Library's Pennsylvania Collection. This special collection contains books that document the history of horticulture in this area for over two centuries. The books include floras describing plants grown here, travel literature, horticultural handbooks, books by Pennsylvania authors, and books that include descriptions of Pennsylvania gardens.

The Society's historical collections, which include The Pennsylvania Collection and the Rare Book Collection, are the heritage of generations of PHS officers' and members' devotion to preserving the area's horticultural heritage. Julie Morris and Mary Lou Wolfe, former PHS librarians, both speak affectionately of the enormous influence of the late Elisabeth Woodburn of Hopewell, N.J., an international dealer of rare horticultural books. A long time member of the Library Committee, she gave PHS a vision of what the library collections could be.

According to Bradford Lyon, current owner of Woodburn's former business, Elisabeth Woodburn believed it was important to assemble the record of horticultural achievements as they were happening, for example, collecting ephemeral items (like catalogs and ledgers) as well as bound publications. She was committed to regional collection development, hence the Pennsylvania Collection, and she believed that the libraries and societies of each area of the country should preserve their unique horticultural heritage. She and Emily



The Historical collections of the Library boasts some significant natural history titles as evidenced by this 19th Century book of botanical plates. Robert Thornton's plates in *Temple of Flora*, London, 1812, are easily recognized because he painted his plant subjects against a landscape. Note the pyramids in the background of his Sacred Egyptian Bean.

Cheston, another late member of the Library Committee, were among the first to draw attention to the turn-of-the-century American women garden writers whose works are now being reprinted.

Many PHS members remember former PHS president Ernesta Ballard's insistence that the sizable budget for restoring and repairing books be preserved even when cuts became necessary elsewhere. During her tenure many priceless herbals were restored and they remain centerpieces of the Rare Book collection. PHS has never sold any of its book treasures to procure operating income.

When a library pays attention to its books, that is, houses its treasures properly and restores them lovingly, gifts are often more forthcoming because the donors know their keepsakes will be honored. Thus The McLean Library has been enriched through the years by many generous donors. These gifts include, for example, a rescued copy of *Kew Gardens* by Virginia Woolf, a limited edition published in 1927 by Woolf's own Hogarth Press. Contributed for the Library's annual book

Before the end of 1998, the staff hopes to have a Web-based version of the catalog on-line on the World Wide Web as a database for anyone (PHS member or the general public) who has access to a Web browser.

sale it was appropriated for PHS's Rare Book Room. Some gifts come to us more directly: e.g. the Bernard Harkness Library of 1,000 books about ornamental horticulture, systematic botany and biographies of plant explorers, botanists and horticulturists.

The Friends of the Library give donations to support the purchase and restoration of items in the historical collections. Each September, the Library holds its fundraiser, a book sale, a treasure-trove of duplicate books and items donated from members' libraries.

A school teacher asks: "We are planning a butterfly garden for a courtyard area at our school. The area is approximately 90 ft. x 30 ft., is closed in on four sides, and only half the area gets full sun. What kinds of plants would be appropriate and how do we plan the garden."

Jane Alling, assistant librarian, helps the teacher search the computer on-line catalog under Butterfly gardening. They find several books and manuals on how to plan and plant a backyard habitat for birds and butterflies as well as several videos on the same subject (a format familiar to youngsters). The on-line catalog also tells the teacher which titles are on the shelf and which are out on loan.

Before the end of 1998, the staff hopes to have a Web-based version of the catalog on-line on the World Wide Web as a database for anyone (PHS member or the general public) who has access to a Web browser. The catalog's riches will stimulate people to visit the library — when they see how much material is available on specific subjects.

Putting the catalog on the Library's Web page will be especially welcome to university landscape architecture and horticulture students who have easy access to the Internet through the Web. The on-line Hotline service will be available to an expanded audience as well. In time, the card catalog we all learned to use in Miss Ames's 8th grade English class will disappear from the reading room of the library.



Top: Elizabeth Farley, a Hotline volunteer, is one of a team of 20 expert gardeners who can tell callers everything from how to keep cats out of the garden to where to find the latest PHS Gold Medal Plant Winners. **Bottom:** Garden researcher Mary Smith travels all the way from Trenton to use the Historical Collection for her garden design research on fences, trellises, arbors, pergolas for a major national publication.

A graduate student from Trenton, New Jersey, is researching how the use of garden features like trellises has changed since the 19th century.

By digging through the card catalog herself and asking advice from the staff, she was able to find many useful books and articles. She said "I enjoyed the experience very much. I appreciated the fact that the library is so easily accessible by train,

though I do wish it were open later some evenings. The environment made the chore very enjoyable. I used four or five books at a time. It is a pleasant, well-functioning research environment. I felt comfortable 'camping out' in the library while on this project. The librarian greeted me by name after I was there several times. Being a student 'guest,' it was nice not to feel intimidated as I have in some research libraries.

In 1996 The McLean Contributionship

awarded a generous grant to PHS earmarked for the library to purchase new shelving and furniture for its new home as well as funds for software and hardware to automate its services. Thus began the process of preparing the library's database and barcoding 10,700 books. The much-expanded library (2,800 square feet) is situated on the first floor at PHS's site at 20th & Arch and through its glass walls offering the public an inviting glimpse into one area of PHS's operations.

The attractive, spacious new circulation desk is command central, usually staffed by assistant librarian Jane Alling. All the library material is on one floor — not only the circulating book collection, but also periodicals and the special collections. Not-so-old-timers will remember that much of the collection was not accessible for browsing at Walnut Street. Julie Morris wrote in the first issue of *Green Scene*, September, 1972: "As anyone who has visited us knows, we can rival the most adept mountain goat on the spiral stairs that lead to the gallery housing all of the bound periodicals as well as botany and flora sections." There is more seating and the larger, new tables have handy electrical outlets for researchers (and today's home gardeners) to use their laptop computers. The superb lighting illuminates even the lowest shelves. The shelving is expected to carry the library well into the next century. The Rare Book Room where the special collections and archives are housed has its own temperature/humidity controls. There's also a conservation room where the book conservator and exhibits' wizard, Eriko Takahashi, repairs precious books and creates exquisite one-of-a-kind boxes for historical material.

Since the Society's move to 20th & Arch St., both Hotliner calls and reference use has shot up dramatically. When asked why, librarian Evans suggested that: "The ambiance has made all of the difference for our visitors. People love our new digs; the lighting is pleasant, the atmosphere is warm and inviting. But we attribute a big surge in library use to voice mail. With our old telephone system, we often couldn't answer the phone because we were on top of a ladder pulling a book off of a high shelf. Now, we can't get away from our callers," she laughs, "they leave us voice mail and e-mail messages night or day."

A researcher asks: "Do you have anything on Delaware Valley gardens designed by Ellen Shipman (1897-1974)?"

The Library's Index to Citations of Philadelphia Gardens is a card index of text and photo references of both existing gardens and those no longer extant. Although the Index, covering several hundred properties, is not massive, it is a starting point for anyone researching an historical garden. Created and maintained by volunteers, it is a work in progress and will eventually be computerized. The Index yields a reference to a planting design by Shipman for Laverock Hill in Chestnut Hill (Philadelphia) discussed in *Portraits of Philadelphia Gardens*, a book by Louise Bush-Brown published in 1929. Many times similar questions lead to illustrated articles in the Library's extensive collection of bound *House & Garden* or Liberty Hyde Bailey's *Country Life in America*.

The staff of Reynolda Gardens of Wake Forest University, Winston-Salem, North Carolina, queried us: "We're restoring a garden designed by Thomas Sears who ordered plants from Henry Dreer, both of Philadelphia. Can you help us?"

Eureka! Sleuth Jane Alling dug through the Dreer catalogs in the Library's Historic Seed Catalog Collection and discovered the original plants for the Reynolda Gardens with their descriptions and even some illustrations.

Much of this Historic Seed Catalog collection dating from the 1800s to 1950 was rescued by former PHS librarian Mary Lou Wolfe in 1982 from an old barn full of rickety floorboards and vermin (see *Green Scene*, Jan.-Feb. 1983, p. 15). The catalogs were market research materials of the Burpee Company, and when the barn had to be vacated, the Burpee family "invited us to see if there was anything that was useful." Mary Lou Wolfe quickly gathered a rescue team that collected, cleaned and inventoried thousands of catalogs. "Many of the catalogs had breathtaking artwork in addition to being a chronicle of the specific plants and cultivars that were offered and popular throughout those decades," Wolfe reports. The Library Committee spent the summer sorting the catalogs, keeping local catalogs and offering the remainder to appropriate institutions who snapped them up. Later the Smithsonian sent a truck to the barn for the leftovers. But from the huge assortment of indispensable documentation, PHS's Library was able to cull the finest.

These seed catalogs are prized references covering, according to Mary Lou Wolfe, "a

The McLean Library Services

By Janet Evans, Librarian

The Library exists for **PHS members**, who may borrow books and video tapes from the circulating collection. The **public** is welcome to use materials in the Library. The 14,000 item collection includes:

- A circulating book collection for members of PHS
- Horticultural magazines and newsletters
- Gardening video tapes
- Historic and rare books and seed catalogs from the 16th-20th centuries

Book Ends; News from the McLean Library of PHS, a quarterly supplement to the PHS News, lists new and recommended titles.

Services

Our friendly Library staff answers questions in person, over the telephone and through our library website (see address below). They can search over 100 databases for your questions on horticulture, botany, landscape design, garden history, and related topics. They'll also help you search the World Wide Web for gardening information.

Horticultural Hotline, a telephone and e-mail service for quick answers to gardening questions. Call 215-988-8777 between 9:30 - noon, Monday - Friday, January - November to talk to one of our 20 knowledgeable gardening experts. If you are unable to call during Hotline hours, e-mail questions to jalling@pennhort.org or fax to 215-988-8783.

Circulation

PHS members may borrow books and videos for four weeks. Visit the Library and check out your books and video tapes, or call us to have the items sent to you through the mail. (Call for details on our **Books-by-Mail Service**).

Hours

9:00am - 5:00pm Monday - Friday

How to Reach Us

Telephone: 215-988-8772, 8779

Fax: 215-988-8783

Hotline telephone: 215-988-8777

E-mail: jalling@pennhort.org

or jevans@pennhort.org

Web Page: <http://www.libertynet.org/phs/library97.html>

Mailing Address:

McLean Library, PHS,

100 N. 20th Street,

Philadelphia, PA 19103-1495



The pictorial record can be as important as the printed word when it comes to identifying cherry varieties. *Le Jardin Fruitier*, by Louis Noisette, Paris, 1821, is a part of the Society's Historical collection which includes a range of European, American and Asian books from the 16th to the 20th Century.

parade of history. The early ones have wonderful engravings, though since photos came into use they seem somewhat duller." Because of the Burpee gift, the Library has become the repository of catalogs from other famous Philadelphia seed houses and nurseries: Landreth, Michell, Rex Pearce and Conard-Pyle to name a few.

The Hotline Volunteer finds the following questions on voice mail:

- *A fourth grader asks: Why do leaves change in the fall?*
- *A woman from Gladwyne wonders: What can we plant that will yield white flowers in June? My daughter's having an outdoor wedding then.*

The Hotliners could be called the Sherlock Holmes of plant information; they are among the most knowledgeable and experienced gardeners of the area. John Swan, a long-time volunteer, reports that most Hotline questions are of the 'dirt-garden' variety and can be easily answered. Highly specialized questions often drive the Hotliners into the reference stacks or to expert librarians Evans, Alling or Sandy Myers. Typically, questions follow patterns with house plants being a winter subject,

over. Richard Both, one of the gardening gurus and a long-standing and dedicated volunteer, reports that the questions keep him on his toes; that he keeps learning and finds his stint at the Hotline a horticultural high. He considers the recent availability of the Hotline via computer a benefit to both the public — who can e-mail at any hour of the night or day — and to the Hotline volunteers — who can spend time preparing thoughtful and thorough answers.

- *The Philadelphia Inquirer requests information and an image of an unusual vine.*
- *A writer e-mails: I am looking for a key to S. American gentians.*
- *A retired gentleman stops by the library: I am interested in the root structure of white ash as it pertains to compatibility with growing ginseng.*

And from the Internet:

- *My friend who lives in Tasmania wants to register some of his plants in the U.S. How would he do that?*

These questions illustrate the kind of research that the library staff does for the

pruning a spring topic and vegetable garden pests a summer one. Until recently people called the horticultural Hotline only during certain hours and either got an answer immediately or were called back later. Nowadays the Hotline service has expanded to voice mail and e-mail.

Volunteers often find a backlog of questions waiting when they come in for their monthly shift. John Swan reports that the questions from the Internet are often complex ones and come from the world

media (not only newspapers, but frequently TV producers), the neighborhood and the globe on a daily basis. On the rare occasion that the experienced PHS staff is stumped, they consult other horticultural librarians through e-mail, their on-line Brain Trust.

Their reward?

Dear Library Staff,

Thanks for the material you faxed me earlier. That is exactly the information we were looking for. Now I have another question: My sixth-grade son has a research project . . .

Philadelphia's legacy is not only its wealth of botanical gardens, arboreta and private gardens. It is the written record that the Pennsylvania Horticultural Society has been collecting since its founding in 1827 as well.

Somewhere in the Library's archives is an envelope labeled: Ash from the Library fire. Over the past 171 years there's been more than one fire at PHS, but this story from PHS's *Summary for a Sesqui*, written by Edward Peebles in 1977, tells an enthralling story. "The Society was housed in the Philadelphia Museum Building on Chestnut Street which, on July 5, 1854, caught fire and was totally destroyed. Member E.W. Keyser saw the fire in its early stages, hurried to the building and, assisted by Mr. Billington and other members, removed our library to a place of safety, losing only 18 books in the process." A passionate commitment to a priceless resource. We are reminded here of the fires of the great Alexandria libraries — at least three fires — often politically motivated, which could have destroyed the extant knowledge. We are grateful for the heritage books still represent today, their breadth of knowledge, and our ability to protect them mechanically. Videos, Internet and Books. We are adding to that heritage, not subtracting, and as gardens change and grow, so do our libraries.

Richard L. Bitner, a frequent contributor to *Green Scene*, is a physician, a teaching assistant at Longwood Gardens, an instructor at the School of the Barnes Arboretum and a home gardener. He serves on PHS Publications, Gold Medal Plant Award and Members' committees.

In the uniquely golden light of autumn *Miscanthus sinensis* 'Yaku Jima', *Amsonia hubrechtii* and *Origanum laevigatum* 'Herrenhausen' together reveal the power of the garden to inspire great drama and passion.

photo by Harriet L. Cramer



Light and Movement in the Garden



by Harriet L. Cramer

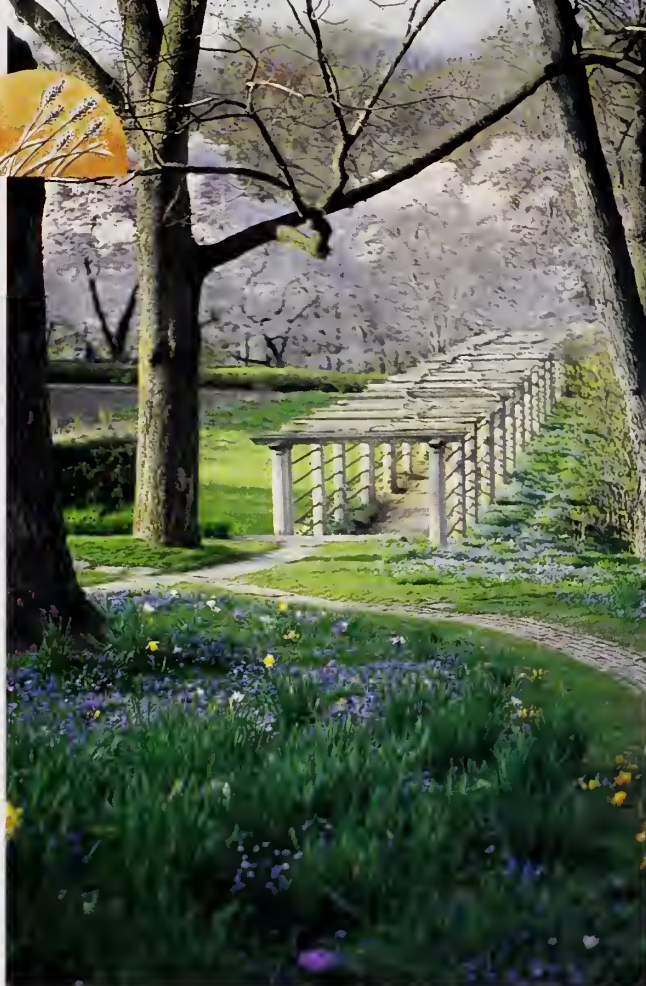
The Evocative Power of Light in the Garden

In a 1938 lecture about *La Condition Humaine*, a work in which a painting was superimposed over the view it depicts so that the two are indistinguishable, French painter Rene Magritte explained: "This is how we see the world. We see it as being outside ourselves even though it is only a mental representation of what we experience on the inside." Our gardens reflect this sentiment profoundly. However dispassionate our intentions, however objective we perceive ourselves to be, we cannot help but reveal in our gardens our past and our uniquely personal view of the world. Both in style and in substance our gardens express who we are, where we have been, and what we hope to be.

This is a subtle concept seldom acknowledged in

discussions about design, or at least landscape design. But if we recognize how our own experiences, how our individual myths and metaphors, shape our perceptions of grace and beauty we can create gardens that are more deeply satisfying. We can create gardens that are not just intellectually interesting and technically accomplished, but that have an ability to move us like an extraordinary painting or brilliant piece of music.

How do you begin to translate this into the practical task of creating a garden? In my own practice I try to focus not only on the more traditional elements of design like structure, color and scale, but also on the less tangible factors. Specifically, I strive to harness the evocative potential of light to make a garden as emotionally powerful as it is beautiful.



Left: Dumbarton Oaks is an aesthetic delight at any time of year. In the clear, sweet light of springtime it is especially inspiring. **Above:** In the low, flat light of winter the coral stems of *Cornus stolonifera* 'Cardinal' are luminescent.

Light was perceived by medieval scholars as divine power. In paintings of the Middle Ages it was typically depicted as a beam of brightness or a golden halo, signifying a godly presence. Even long after its celestial meaning waned, light was and continues to be recognized as an artist's most fundamental resource.

Gardeners, on the other hand, have traditionally studied light more in a practical than an aesthetic sense. They try to understand the quantity and quality of light in their gardens to determine what plants will grow well there and not as a design element in and of itself. But light in a garden — how much of it there is, where it comes from, how it illuminates different forms and shapes differently over time and from place to place, the interplay of light and shadow — is in fact as critical a design consideration for gardeners as it is for painters. Indeed, the artistic potential of light in the garden should be evaluated at least as carefully as we do its cultural significance.

In this regard the work and observations of painters are most helpful, especially because so few landscape designers have written about light as a design fundamental. Think about Leonardo da Vinci and his masterful use of "chiaroscuro." This literally means "light and dark" and has been

used by artists for centuries to more strongly define objects and forms and to modify colors. Light and dark, sunlight and shadow, can surely have as dramatic an impact in the garden as it does on canvas. Imagine walking through a woodland early on a summer morning with the sun rising in front of you. Light falls on the forms before you from behind and from above, and the whole scene is backlit. The shapes you see — of the trees, shrubs, rocks, whatever — are bold and their edges clearly delineated. The details, on the other hand, are vague in such a light. The greens look much darker than they would in winter and other colors are muted. The vertical forms, especially the trunks of the trees, are especially dark. In fact the prevailing impression of the landscape is dark, illuminated in places by a halo effect.

Such a scene can be extremely dramatic, evocative of the forest primeval, moody and mysterious at the same time. Why do we not make more of an effort to recreate this sensibility in our own woodland gardens? This is not to suggest we neglect color, structure, plant culture and other essential concerns, but that we consciously analyze how to plant and arrange forms in the garden to maximize the aesthetic potential and protean power of natural light.

Light in the garden, even more than our choice of plants, can bring us closer to the ideal we each have of the perfect landscape. Often this ideal is formed by the

landscape that first captured our imaginations and hearts as children. Just as a particular scent can unlock a long-forgotten memory so too a certain kind of light can remind us of a landscape that touched us long ago. If we can recreate the *sensation*, not necessarily the appearance, of that light we begin to create a garden more emotionally satisfying and profoundly personal in style.

An appreciation of the sensation of light can be heightened, both for the painter and the gardener, by studying the works of the Impressionists. Recall the paintings of Monet and Pissarro and how they examined the same scene at different times of day. The changing light created strikingly different results. Not only does the overall impression vary from one time of day to another, from one kind of light to another, but the hue of the colors is thoroughly altered. On a sunny day in early morning a cool, purplish cast tends to predominate. By mid-day there is a bluish-white hue to the light, now the light is most intense and direct and shadows are few. As the late afternoon deepens into evening the prevailing light has a yellowish-orange cast and the overall sensation is one of warmth.

To make matters more complicated remember the quality and quantity of light are significantly affected by the time of year and where one lives. In winter, for example, the angle of sunlight is low and there is a distinctly flat quality to the light. Primary and secondary colors tend to be subtle and soft at this time of year, tertiary colors like mauve, gray, brown, and muted



Left. On a rooftop in the city, *Panicum virgatum* 'Heavy Metal' (blue switch grass) and *Pennisetum alopecuroides* 'Cassian' (Cassian's fountain grass) show off their fall color on an overcast day. In their texture, form and tendency to bend and sway in the wind they enliven what would otherwise be a hard and uninventing space. **Right:** *Arundo donax* (giant reed grass), *Calamagrostis xacutiflora* 'Karl Foerster' (reed grass), and *Deschampsia cespitosa* 'Schottland' (tufted hair grass) move with a graceful elegance that belies their size.

reds and greens prevail. The dominant feature of the landscape is the silhouettes of trees.

By summer the sun is directly overhead and the outlines of trees are not nearly so bold a presence. The light is bright and intense and the preeminent color in the landscape is green. The vivid blue-greens of summer make other colors seem darker than they would in winter, especially if strongly contrasting colors are placed alongside one another. Warm colors like grays, blues and purples woven throughout the garden help to create, as in a painting, a sense of harmony.

The light of autumn has a truly magical quality. It seems clearer and gentler than the severe light of summer. In the ethereal, golden hues of autumn the primary colors are brilliant while the lush greens of summer start to lose their vibrancy. Both autumn and spring are times of transition, but while autumn is defined by dazzling reds, oranges and yellows, the light of spring is dominated by the yellow-green of new growth. In this most hopeful of seasons the light has a particular sweetness and clarity unique to spring, reminding us of nature's expansive capacity for renewal.

While I envy the painter's ability to capture and hold onto that moment when the light seems ideal, I like the challenge of trying to create that moment in the garden

over and over again. When the golden light of autumn makes late-blooming perennials

like asters and goldenrods seem electrically charged and the flat, pearly gray light of winter reveals the virility of the trunks of trees, when the interplay of light and shadow makes you *feel* the substance and form of the garden and that feeling leaves you breathless, then you begin to understand the power of light in the landscape.

Movement in, around and through the garden

Few gardeners stop and sit in their gardens. We tend to be a rather compulsive group, and there's always some inner voice demanding that we nick off that spent flower or yank an annoying weed or dig up and replant a particular shrub this very minute because all at once it's clear it isn't working where it's now planted. As someone who has moved one particular daphne in my own garden an embarrassing number of times (seven is admittedly excessive), I am certainly not in a position to criticize this manic behavior. The fact is that our own gardens are not, for many of us, places in which we are able to relax and reflect.

In this ceaseless quest for perfection we risk failing to notice the truly magical, and almost always fleeting, moments in the garden. How can we appreciate the extraordinary clarity of the early morning light in late summer, the haunting rustle of leaves

swirling in the brisk autumn wind, the rich smell of the soil right after it has been turned, when slugs are gorging themselves on our hostas and the goutweed in our neighbor's yard slithers malevolently in our direction?

Ironically, as we bustle about the garden we cannot help but miss the movements of plants, birds, and insects around us. Consequently, we overlook one of the most quietly charming aspects of the garden. A well-designed garden *moves*, it responds to the wind and rain and wildlife in and around it. In this way it is dramatically different from any other artistic endeavor. As painter Andrew Wyeth observed, "... wind moving through the grass so that the grass quivers. This moves me with an emotion I don't even understand."

How do you create a garden with movement as a specific design element?

Think about what actually moves in the garden and the task becomes less formidable. Most trees and shrubs will of course bend and sway in the wind, but to dramatize the vibrancy of the air around us ornamental grasses are unsurpassed. Grasses not only quiver, they thrash and tremble and dance in the wind. The sight and sound of their leaves and inflorescences fluttering in late summer and autumn bestow a lush, volatile sensibility to the garden. In winter their clattering movement enlivens what would otherwise be a painfully dreary landscape.

Large, bold grasses will naturally create the most striking sense of movement in the



photo by Harriet L. Cramer



garden. A clump of *Arundo donax* (giant reed), *Miscanthus giganteus* (giant Chinese silver grass), or *Saccharum ravennae* (Ravenna grass) swaying in the hot, humid breeze of a late August afternoon is an exhilarating sight. If the massive scale of such grasses seems too daunting or you fear such a planting could quickly overwhelm your garden, try using just one large grass in a container. Christopher Lloyd has grown *Arundo donax* in a pot at Great Dixter for years. Be sure to water the pot frequently during the growing season especially in fall before the grass goes dormant for the winter. Cut it back in late winter or very early spring, take it out of the pot and root prune it, and replace the old potting soil. Now you can have the exuberance of the huge grasses without sacrificing control over your garden.

The medium-sized grasses, those reaching an ultimate height of 3-5 ft., are unquestionably easier to integrate into the garden. I have a great fondness for our native switch grass (*Panicum virgatum*), especially for some of the cultivars introduced in recent years. There are several red-leaved forms, notably 'Haense Herms', 'Rotstrahlbusch', 'Squaw' and 'Warrior'. The differences between these are subtle at best. The cultivar known as 'Heavy Metal' is justifiably popular both for the powder blue color of its leaves and its very restrained habit; it grows only about 4 ft. tall and 2 ft. wide and, unlike its red-leaved relatives, it remains attractively upright even after heavy rain. A newer introduction is 'Cloud Nine', which reaches about 8 ft. in height and has clear yellow fall foliage and a loose, open habit.

When the switch grasses bloom in late summer it is a wondrous sight. Their inflorescences are elegant, airy panicles. Study them up close and you realize each inflorescence is a symphony of shades of red,

burgundy, orange, pink and yellow. As summer becomes fall the flowers give way to seedheads which, while less colorful, are every bit as captivating when they shake and flutter in even the slightest wind.

Spodiopogon sibiricus is another medium-sized grass that brings movement to the garden. Less well-known than switch grass, spodiopogon has a somewhat bamboo-like appearance with flat, linear, bottle-green leaves. It grows 4-5 ft. tall and roughly 3 ft. wide over time. This grass will sometimes develop a lovely wine-red fall color, but more often than not our summers are too dry and the foliage instead turns a dull brown.

What is most appealing about spodiopogon, whatever its color, is its strong, dense form and horizontal habit. This enables it to move in a uniquely firm and forceful manner. Though not a plant of great grace or delicacy, spodiopogon is exceptionally lively. When it shudders in the wind the garden seems a more dynamic, enthralling place to be.

If you combine plants that move with plants that will draw birds, bats, butterflies and insects the effect is downright electrifying. There are dozens of books that explain in great detail how to attract beneficial wildlife. I am constantly astounded by how easy this is to do, even in what seems the least hospitable of environments. Not long after I placed a single butterfly bush in a large pot on the rooftop deck of a center city garden I noticed both a Monarch and a Black Swallowtail happily feeding there.

Plant a small grove of crabapples and the number and diversity of birds you lure to the garden will amaze you, especially if you use selections with an abundance of diminutive fruit like *Malus* 'Indian Summer', *M.* 'Naragansett', *M.* 'Prairifire', *M.* 'Profusion' or *M.* 'Serenade'. Birds will

Spodiopogon sibiricus moves with a unique dignity and strength. The panicles of tiny white florets of *Melica ciliata* (hairy melic grass) are especially charming against the bright green leaves of Spodiopogon.

also flock to heavily fruiting viburnums included in your mixed border, foundation planting, or as an understory shrub on the edge of a woodland garden; I am especially fond of *Viburnum setigerum* (tea viburnum), *V. nudum* 'Winterthur' (the fruits are persistent and turn slowly from white to pink to a rich, dusky blue), and *V. dilatatum* 'Asian Beauty'.

Hummingbirds are the very epitome of movement in the garden. Just one *Lonicera sempervirens* (coral honeysuckle) trained on a trellis or sprawling over a fence is likely to attract the ruby-throated hummingbird, the sole member of this genus to nest east of the Mississippi. The honeysuckle cultivar 'Major Wheeler', named for the former president of the North Carolina Botanical Garden Foundation who found it along the N.C. coast, is an exciting recent introduction because it blooms over a remarkably long period of time.

When the frenzied motion of the hummingbirds seems too exhausting, remember what writer Diane Ackerman** called "the passive flyers" in the garden. Autumn leaves, milkweed pods, maple and ash samaras, pollen, the ephemeral spring blossoms of the shadbush, cherry and crabapple trees - all of these swirl in and through and around the garden and thereby transform it. They remind us, as do the butterflies, birds and insects and the plants that move in the wind, that "... there is no stillness in the sky, or anywhere else where life and matter meet."

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*Available on loan through The McLean Library to PHS members.

**A Natural History of the Senses, Diane Ackerman, Vintage Books, N.Y., 1990.

Seeing the Garden with “Feng Shui Eyes”



by Vicki Mowrer Lashley



photo by Ira Beckoff

At their city garden on Roosevelt Boulevard, Ron Landry and Juan Carrasquilla found they had been instinctively using Feng Shui techniques; after seeing a television program on the subject and researching the principles they began to refine their gardening style and techniques to more consciously reflect this ancient system.

I was at a Summer Solstice celebration when I first heard someone talking about Feng Shui*. I assumed they must be referring to something on a Chinese menu or a Jackie Chan movie, but the more I eavesdropped on their conversation, the more aware I became that this was something more mysterious and interesting. I maneuvered my way to a seat at the table and became spellbound by what I heard. Afterward I did a little more research and then committed myself to a summer-long ‘Feng Shui’ class hoping to learn principles that might help me to create gardens that were not only beautiful but helpful and healing as well.

The literal meanings of the Chinese words Feng and Shui are “Wind and Water,” which is kind of a shorthand

*Feng Shui is pronounced “Fang Shway”

for ‘natural surroundings.’ The ancient Chinese masters used the system primarily in the landscape as a tool to help people find the most auspicious location for their home. Mountain ranges were looked upon as dragons; some spots along the range boded well, but if one inadvertently placed one’s home on an angry dragon’s tail a family could have a very rough ride through life. Over time, as China became more and more densely populated, there were fewer naturally auspicious places left to site a home. The masters decided that it was now more important to concentrate on making the dwelling and garden spaces as auspicious as possible for its occupants. The application of Feng Shui moved indoors and within the garden wall.

Recently there was been an increase in awareness of the practice of Feng Shui. Two years ago the bookshelf at the local bookstore had only one book on the subject. Now there are two



Top: A seat in the garden with ceramic discs that Ron Landry created. **Bottom:** Blue glass is set on the tokonomo, a low platform used to display objects that will conjure special images. Ron made the colored tiles on the ground in his pottery studio.

dozen plus. Of those two dozen only one or two are solely devoted to Feng Shui and the garden, but I am sure the number will increase. Americans continue to have a growing love affair with the garden. City dwellers often manage to create a miraculous garden on a rooftop or balcony. People are becoming more aware of the many ways gardens provide sanctuary in a hurried world. We are looking toward other cultures for inspiration and information on how to make our gardens more effective. The cultures Americans are avidly investigating are those of the East where Feng Shui has its origins. Now that Feng Shui has been given birth in America in interior

spaces, it is time to bring it back into the landscape and particularly the garden. What follows is a condensed Feng Shui Primer.

The goal of Feng Shui is to manipulate (energize, dissipate, stabilize) natural forces within a person's dwelling space with an eye to the individual's or family's personal concerns and needs. There are many schools of Feng Shui. The first mention comes from the Han Dynasty and 'The Canon of Dwellings,' written during this period. The Canon was used to site tombs and the emperor's palaces. The first 'school,' Land Form School, dates back to the Tang dynasty (A.D. 618-907). This

school looked at natural land formations to determine the quality of a location and whether or not it would be 'lucky.' The Land Form School evolved into the Compass School, which literally uses a compass along with astronomy and astrology. What this school primarily contributed was the knowledge and use of the four directions. For example, a southern orientation toward the sun proved to be particularly conducive to the achievement of fame, longevity and fortune. The third and most modern major school is the Black Hat Sect Tantric Tibetan Buddhist School. The master of this form, Mr. Lin Yun, saw a need to make the ancient practice more accessible and more adaptable to modern and particularly Western situations. East meets West.

A Balance of Forces

Basically, what Feng Shui attempts to accomplish is a balance between the forces of yin and yang (the opposite but complementary forces of nature) to create a better flow of chi. If you combine our words 'energy' and 'spirit' you then have a fairly accurate concept of what the Chinese refer to as 'chi.' Chi travels best when it can flow gently without obstruction. Not too fast and not too slow. According to the Black Hat Sect this is done by assessing your environment and rearranging things according to certain guidelines.

One of the Basic Guiding tools is called the Bagua.** The Bagua is a kind of chart derived from the I Ching or Book of Changes, one of the five classics of Chinese tradition and education. We will use it to guide our way through your garden. The Bagua has eight sides, each of which relates to a different fundamental life issue and includes many other components relating to natural forces. The four cardinal compass directions are affiliated with four elements of nature: South with Fire; West with Metal; North with Water; East with Wood. The Fifth element, Earth, is at the center of the chart. The Chinese believe that these five elements account for all matter and together they make up the essential life force called chi. By balancing these disparate items you can manipulate your fate.

Start with the chart

You can use the Bagua Chart for your entire garden or a certain special section or both. Illustration #1 shows the Bagua superimposed over a whole property and Illustration #2 shows it being oriented over

**Bagua is pronounced "Bagwa"

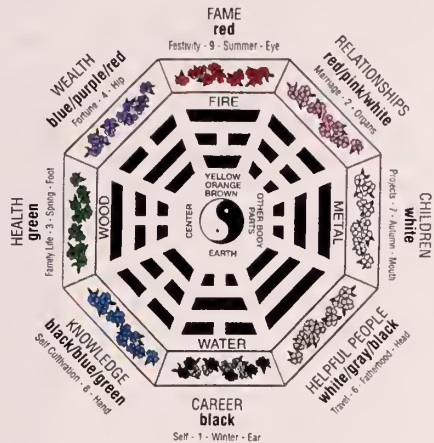
a section of the property. The Black Hat School always orients the Bagua by placing the Career Section relative to an entrance point. Some refer to this section as the Self area. This is an important area because each individual is at the center of all their experiences. Career can mean doctor, lawyer, homemaker, volunteer and other endeavors important to us. In other words, our identity. As gardeners we know that entrances are important. They set a tone. They deliver a message.

Study the boxes accompanying this article for suggestions about plants and flowers relating to each section of the Bagua. Using these plants with certain properties and flowers of particular colors

will help to enhance the flow of energy to an area in your life that might seem a bit sluggish. It is usually best to pick one or two areas. Although we might want everything in our life to change, too much too fast can be chaotic. Think it through and see which area would really help you to achieve your goals. Do not look into the future beyond six months: part of the process is the identification of change itself, and you will need to remain flexible to incorporate it as a principle into your life. For example, you may feel as if your ability to acquire wealth is more dependent upon finishing your college degree and that a better income would truly enhance your life. Find the Wealth and Knowledge segments in your garden and make some adjustments. Another example would be that you have a loved one who is ill. Their recovery is important to you. You want good doctors and an income stream to allow you to spend more time with them. Find the Helpful People and Wealth segments and make adjustments there.

One of the best ways to begin to play with Feng Shui in the garden is by using plants that bloom with appropriate colors and small statuary, stones, sticks, metal objects, or other materials that act as icons. Paint can be fun and useful. For example, if you want to bring more Fame into your life, plant red flowered (or foliated) plants and spray paint a stone red (paint nine stones if you are feeling ambitious). There are end-

The Gardener's Bagua created by Vickie Mowrer Lashley

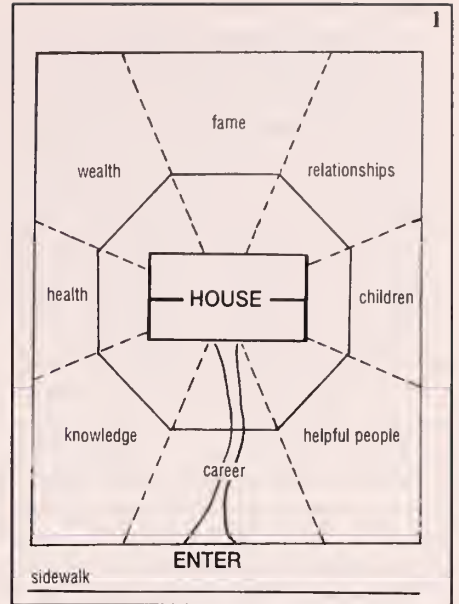


The word alignment used in a Bagua graphic is designed in a way that makes the Bagua easier to use by orienting them to the center. Once you locate an entrance, you can go to the middle of your property and from this vantage point easily use the Bagua to find any other life enhancement area. Simply turn your body toward the area you are locating and hold the Bagua directly in front of you keeping the Career section oriented towards the entrance. The words will then be facing you and easy to read.

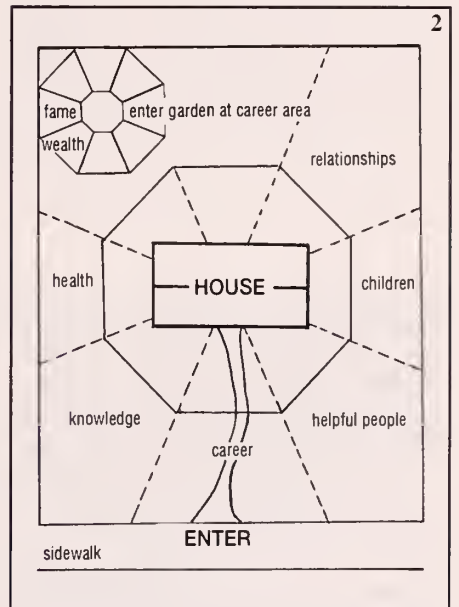
less combinations. The more you play with the concepts the more you will just 'tune in.' It will then become what is called 'intuitive Feng Shui' for you. This is basic knowledge combined with listening to your inner voice. You will be amazed at what you come up with.

A good example of this phenomena is the home and garden of Juan Carrasquilla and Ron Landry. Juan and Ron live in Philadelphia on Roosevelt Blvd. They affectionately refer to their garden as 'Ida's Garden.' Ida was Ron's late aunt. She took care of him for most of his childhood. He and Juan lived with Ida and took care of her to the end of her life in their home. Ron's memory of the feeling of great safety and joy he experienced as a child sitting with his Aunt Ida in her garden inspired him and Juan to create a 'sitting garden' for her in the front of their home. She loved 'her' garden and marveled at what 'those boys' were doing with it. And boy, they really did things to marvel at. They did such a magnificent job that they won second place in the 1996 City Gardens Contest in the Large Individual Flower Garden Category.

During the interview with the PHS judges Juan revealed with the garden was put together according to some principals of Feng Shui. I went to see Juan and the award-winning garden; one look and I knew why the judges picked it. Juan and Ron created a small peaceful paradise right there along the busy Roosevelt Blvd. It was



This illustration shows the Bagua superimposed over an entire rectangular-shaped property. The Career segment is always oriented at the main entrance with Fame being its direct opposite.



You can continue to use the Bagua to apply Feng Shui principles to more specific areas of your property. In this illustration I am presuming that this property owner has chosen to place a garden in the Wealth area of their property. However, the Wealth area of the garden is now determined by placing the Bagua over the garden site with the Career area beginning at the gateway to the space. Again, the Fame section is always directly opposite any given entrance.

charming, interesting and personal. As one of the judges said, "You can feel the energy in this garden." I knew that unbeknownst to them, Juan had been practicing intuitive Feng Shui.

Ron and Juan: Intuitive Feng Shui

It all began one night while Ron and Juan were watching a segment on the subject of Feng Shui on the news program "20/20." In this short half hour, Juan had some explanation and validation for what he had been doing in his own home and garden all along. Fanciful layouts and color combinations of plants combined with natural and manmade found objects abounded. Juan would alter these items according to his mood or the season. Even though, before this epiphany, people told him he was a bit crazy, he persevered with his gut feelings. He just 'had to do it.' Now this craziness had a name: Feng Shui. Juan and Ron were so excited they could hardly wait to find a copy of the book the interviewer had referred to. This book by Sarah Rossbach simply entitled *Feng Shui: The Chinese Art of Placement* is the modern Feng Shui bible. Although many books are available, one is able to learn much of what one needs from this book alone. Juan studied it carefully, and they began to fine-tune their spaces. The result is a balanced and beautiful garden. When Juan asked me to give him my analysis of how well Feng Shui principles were applied in the garden, I came up short. I simply kept telling him that he was doing just fine on his own.

Juan and Ron have some marvelous examples of Feng Shui 'cures' in action. Ron is a potter and constructs some of the most wonderful wind chimes I have ever set eyes on. Again, 'intuitively' they chose to place them in just the right spots to enhance their experience of the space they live in. One example is a long and wonderfully melodious chime hung from a pine tree that grows outside their large front window. It adds drama from many vantage points and the element of sound to their garden experience. They have spent a great deal of time on the pathway that leads them to their front door into the garden and vice versa. It felt as if the energy was not moving quite properly along the pathway, so this year they added colored tiles that Ron made in his pottery studio. Nine to be exact, since Juan has learned that the numbers 9 and 7 are auspicious. These numbers are used in the most creative ways in spots both inside and outside their house. One inventive and inexpensive way they have accomplished this is to use stacks of seven or nine tiles to create an energy center called a "tokonoma." Tokonoma is the Japanese word for a low platform used to display special objects such as a flower arrangement and scroll painting for the traditional tea ceremony. So, atop one of

Juan's and Ron's stacked tile tokonoma there might be placed an object to encourage a particular thought pattern. I noticed brightly colored pieces of glass in some places and in others objects acting as icons that conjured up particular mental images. These guys are doing a terrific job of creating positive 'vibes' (what the Chinese call 'chi,' which means energy) all around them. Their home and garden not only looks wonderful but feels wonderful too. It was a pleasure to be there.

We spend much of our time in our homes and gardens. What exists there follows us wherever we go. Juan comes from a rather chaotic background, so for him to feel at ease in life, he needs to create a peaceful and quiet space to dwell in. Ron enjoys the creative vitality of their dwelling place. Both take the peaceful, calm aliveness they receive from the spaces they create with them into all aspects of their lives. This is really what Feng Shui is about.

Many people are hiring Feng Shui practitioners to assist them with the alteration of their spaces. If you are choosing this path you are in good company. Donald Trump's use of Feng Shui specialists is legendary. The school that I attended is called the Shambala Feng Shui Institute and was founded by Melinda Joy Miller who stud-

continued on page 37

Plants in the Feng Shui Garden

All gardeners know that plants have healing properties. The reference list below is about the healing quality of color. There are other qualities, such as shape, that a Feng Shui gardener may take into consideration. Other publications and places mentioned in this article go into greater detail and cover the gamut from trees through annuals. Please refer to those if the Feng Shui bug really bites you. These recommendations are not comprehensive; for additional suggestions I recommend checking the PHS Library catalog for its extensive listings on color in the garden. e.g. *Color in Your Garden* by Penelope Hobhouse (first American edition, Little Brown, Boston, Massachusetts, 1985).

CAREER: More color choices exist today in the black arena than ever before. Chocolate cosmos, black-faced pansies, iris species, black johnny jump-ups, nearly black daylilies and roses.

KNOWLEDGE: Blue is the dominant color for this area including blue-black and blue-green. Ageratum, morning glories,

nigella, salvias, pansies, bachelor buttons, torenia, petunias, lobelias, campanula, geranium, virginia bluebells, forget-me-nots, delphinium, iris and caryopteris.

HEALTH: Green is the color of health. Shamrocks, *Nicotiana langsdorffii*, parsley, dill, hellebores and *Astrantia*.

WEALTH: Purple is the royal color and includes purple-blue and purple-red. Larkspur, gomphrena, heliotrope, pansies, geraniums, petunias, asters, purple cone-flower, echinops, phlox, veronicas, lavender, allium, *Aubrieta*, and dame's rocket.

FAME: Red is the color of self and fame. Put yourself in the spotlight! Red coleus, sweet william, cockscomb, dahlias, petunias, salvias, zinnias, snapdragons,impatiens, geraniums, verbena, californiapoppy, astilbe, geum, red penstemon, red lobelia, red roses, cannas and red trumpet vine.

RELATIONSHIPS: Pink is the gentle color of caring relationships. It is the color of romance. Pink roses, mandevilla, bleeding heart, snapdragons, pink zinnias, astilbes, anemones, dianthus, geraniums,

impatiens and lilies.

CHILDREN: White gives clarity to handling children and juggling projects. Cleome, alyssum, impatiens, nicotiana, petunias, pansy, moonflower, geraniums, lobelia, verbena, yarrow, campanula, foxglove, iris, veronicas, white penstemon, astilbe, peony, phlox, shasta daisies and chrysanthemums.

HELPFUL PEOPLE: Gray is a harmony-producing blending color. A useful tool when you feel you need to receive or want to give help or assistance - both delicate positions to be in. Artemisia, lambs ear, santolina, junipers, gray heucheras, silver-foliaged lavender, *Perovskia* and woolly thyme.

CENTER: This is the Earth area and relates to the center of your property. It is represented by all of the earth colors, including yellow, brown and orange. Butterfly weed, cassia, lantana, marigold, zinnias, mexican sunflowers, pansies, daylilies and lilies.

ied under Professor Lin Yun. You can call there and get a reference for a practitioner in your area. The number is 610-489-2684.

So, get ready for a ride on the wheel of life as it turns with more awareness through the vehicle and practice called Feng Shui.

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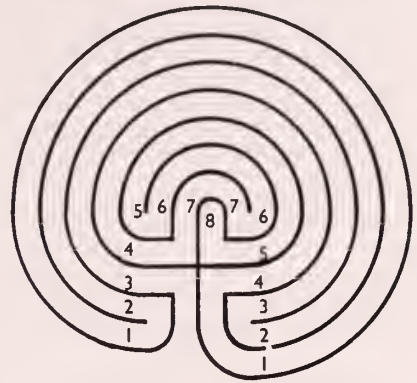
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Victoria Mowrer Lashley, a frequent contributor to Green Scene, is a garden writer and artist inspired by nature with a special interest in creating sacred spaces and designing meditation gardens. Formerly from Philadelphia she now resides in the Hudson Valley where she practices her artwork and runs her floral memorabilia company, Passion Flowers. She may be reached at 914-758-4001.

A Feng Shui Labyrinth Garden

Instead of paying tuition to the Feng Shui Institute I agreed to create a Labyrinth Meditation Garden for an area on their property. It was placed in the Fame area of another larger Meditation Garden. The school was contemplating a way to have Feng Shui become more well known and valued so that orientation made perfect sense.

This pattern is called the 'Classical Seven Circuit Labyrinth.' It is used for problem solving and contemplation. Although this labyrinth is quite large and a bit complicated to lay out, you can achieve a satisfying result using it as a guideline to create something a bit simpler. An easy way to accomplish your goal is to make the paths as wide as your lawn mower. The strip in between can be grass left to grow tall or flowering plants relating to areas of the Bagua. One excellent use of the Labyrinth Meditation Garden Walk is to enter it with an issue in your life in mind. Practice by using your finger to trace the circuit and 'walk' the path. You will even find that useful as a meditation tool. As you go in (at 3) state the following:



ENTERING

enter 3 - state 'I think . . .
enter 2 - state 'I feel . . .
enter 1 - contemplate The Physical aspect
enter 4 - contemplate The Spiritual aspect
enter 7 - contemplate The God/dess
enter 6 - contemplate The Vision
enter 5 - contemplate The First Step
enter 8 - Breath

RETURNING

return by 5 - envision the First Step
return by 6 - see the Vision
return by 7 - thank the God/dess
return by 4 - be aware of The Physical
return by 2 - restate "Now I feel . . .
exit via 1 - restate "Now I think . . .

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This small, lush garden on Roosevelt Boulevard in Philadelphia, was designed and tended by Juan Carrasquilla and Ron Landry, who adapted Feng Shui techniques using color, textures, placement of plants and tiles, chimes, benches and a pool as well as other intriguing materials to engage the spirit. The garden won Second place in PHS's 1996 City Garden Contest in the Large Individual Flower Garden category. See page 33.

photo by Ira Beckoff



GREEN SCENE

THE PENNSYLVANIA HORTICULTURAL SOCIETY • July/August 1998 \$2.75



*An issue about
The Garden's Gift
of Privacy,
the Intimate Moment
and Escape*



7.



12.



35.

Front Cover: A *Stewartia pseudocamellia* frames the 32-ft. lap pool where daughter Anja dangles her toes. The small building at the rear has a slightly Japanese look and provides space for pool supplies. photo by Mary Lou Wolfe

Grow with us.

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Lori Salamida and son Wynn Geary
at the Morris Arboretum of the
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The Garden's Gift of Privacy, The Intimate Moment and Escape

by Jean Byrne

When Duane Binkley sent us his manuscript about the city dweller's quest for closeness to nature for this issue of *Green Scene*, he wrote in his cover letter: "The article doesn't include a single plant list." Nor do most of the other articles. And those that do mention specific plants don't include "how-to" instructions. When brainstorming a year ago to decide what this special single subject issue would be about, members of the Publications Committee decided to explore gardens more philosophically. They said "Let's do an issue about Privacy — the Intimate Moment — Escape — Romance," all in the garden, of course.

In thinking about privacy, we considered the loss of privacy. Claire Sawyers tells us about how when a neighbor removed the border of shrubs from her "borrowed scenery" it destroyed her garden sanctuary and privacy. She describes on pages 32 her creative scramble to restore that privacy. Because plants are living things and become what they are in their own season, you cannot just recreate a sanctuary by throwing up a few new shrubs to replace those removed. Any addition or subtraction in the garden can alter the whole ambience, and as Claire observes "Isn't it necessary to mourn such losses?"

So much of the past, both what people did experience or didn't experience, inspires what they do in their gardens today. Judy Foley talked with gardeners about their memories: the scent of a plant reviving an afternoon or a whole period in one's life; one woman still remembers climbing the wall of a shrine as a child in Japan and finding an iris growing in the snow on the other side. Today her business

is garden accents, and the lesson from her experience "value the unexpected in the garden" is one she passes on in her garden lectures.

Richard Bitner writes about treehouses and the escape they afford: but escape from what? Some people have brought their phones and radios up to the treehouse with them, and one treehouse owner even plans to provide for a modem and fax. So it's possibly being "out of reach" in some deeper way barely expressed by the owners: A fulfillment of some childhood longing for a special place of one's own, an adult need for a separate dwelling apart from the formal requirements of everyday living, or the power of viewing the landscape in a global way.

Mary Lou Wolfe tells about an ordinary house that became extraordinary when the owners sheltered it with a remarkable array of plants, a small pool, and structures inspired by their stay in Japan.

The subject of privacy, intimacy and escape in the garden is probably inexhaustible. Landscape architect Rodney Robinson says he always begins a design keeping in mind the mood and focus of a place. He believes these metaphysical concerns shape our gardens as much as any plants or structures there. They motivate our activity in the garden, our placement of plants, our commitment to maintaining what's there, our search for ever more

refined solutions. In this issue we've nibbled at the edges of the questions of privacy, intimacy, escape yet there is so much more to say, so much that is daring, reflective. Olivia Lehman writes about public gardens as a place for courtship and even included Gardens Collaborative's director Barbara Kłaczyńska's list of the best places for kissing (see page 35). As for daring, we will venture no further than that, leaving our readers to find their own spaces for these private matters. We're sure you're way ahead of us. Wouldn't it be fun some day to explore literature for the roles gardens have played in dalliances, politics, religious experiences and social status. After Shakespeare and Jane Austen, there are surely great American chroniclers of privacy, intimacy, escape and romance in the garden. You tell us.*

*Editor, *Green Scene*
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photo by Addison Geary



Hideouts & Porch Swings

Understanding Privacy and Intimacy in the Garden

 by Rodney D. Robinson

In reflecting on this issue's topic: "Places in the Garden for Privacy, Escape and the Intimate Moment," I realize there's a subtle difference between "private" and "intimate" spaces. Privacy connotes concealment, seclusion, solitude; intimacy, on the other hand, requires a degree of familiarity (family), and elements of personal involvement. The ubiquitous "secret garden" is surely private in the sense that being concealed, it excludes visitors and invites solitude. Whether the same garden would be considered an intimate space depends on whether it is designed to welcome the visitor as "family." The distinction between private and intimate spaces, then, seems to be whether the design emphasizes exclusion or inclusion.



At Hidcote in England, a bench tucked into the corner of the garden provides a secluded vantage point for the artist.

Garden design history opts for excluding others. Some of the earliest known gardens were surrounded by walls to keep out the harsh desert and both human and animal trespassers. Once inside the garden walls, the visitor was isolated and insulated from the outside world. The gardens of Islam are characterized by their introspective nature; they were enclosed by walls, with views out of the garden rarely provided. The Alhambra in Spain, constructed in the 13th Century, is known for its Moorish gardens set within a fortress high atop a mountain. Contained within massive walls, the gardens virtually ignore the magnificent vistas and focus introspectively onto delicate pools and water courses.

In contemporary gardens we still creatively seek ways to exclude the outside world and maintain our privacy by defining our individual space with walls, fences, densely planted hedges and shrub borders.



This cottage garden at Sissinghurst in England provides the seclusion and intimacy necessary for a secret garden.

On the other hand, privacy is not always a requirement for an intimate space, which we are also drawn to, and, which is not exclusive. Consider the window seat. The window seat offers a unique place within the home where you can sit at the edge of a room, partly enclosed by walls and observe both inside the house and outdoors. Nestled into plantings at the edge of a garden "room," a well-placed bench can provide a similar intimate spot within the garden. Children seem drawn to window seats and garden benches alike, which is a clue as to why we adults enjoy them as well.

In the book *The Geography of Childhood**, author Gary Paul Nabham observes how children interact with the landscape. On his family hikes into the Colorado mountains, the adults scan the

**The Geography of Childhood*, Gary Paul Nabham Beacon Press, Boston, MA, 1994 ISBN0-8070-8525-1.

landscape looking for great vistas and picture-perfect scenes to photograph, while the children focus on their immediate surroundings, searching the ground for stones, wildflowers and other possessions close at hand. Gary has come to realize that a few found objects and intimate spaces mean more to his children than all the panoramic views he can show them. His views are consistent with observations of environmental psychologists who believe that most preschool children have a predilection for playing in nest-like places when those kinds of places are available. Child-sized space provides a zone of safety and comfort from the adult world that in all probability meets some developmental need. Recall as a child how many of us draped a blanket over a piece of furniture to make a hideout and enriched the place with familiar personal objects like pillows and stuffed animals. Some of us even convinced the adults

to let us eat and sleep in the draped fortification. Not all of our hiding places were made, many were found. I remember an enormous lilac planting that was large enough to have several pathways leading into its hollow center. What made the lilac so attractive to me as a hideout was the way we could spy on the outside world as we sat camouflaged within.

As we grow older our attraction to intimate places remains with us, for everyone seems to love a secret garden: a private setting enriched by the invitation to quietly observe nature. Our gardens are in many ways similar to those blanket hideouts we created as children. So instead of blankets we build walls and plant shrubbery. Instead of stuffed animals we fill our gardens with plants and art objects. Our desire to consistently create spaces and opportunities for privacy evolves as we grow older. Children do have a need for privacy, but it may not



Top: This garden in Washington, D.C. needed more privacy from the house. **Bottom:** A tent creates a room within a room and provides the needed privacy.

be conscious as their nature is to be spontaneous and intuitive. Adults prefer greater specialization in their settings. When we want to interact with our neighbors, we choose the front porch swing. When we want to entertain or rest, we choose the back yard. If you think about it, your entire house is a gradient of specialized settings from the most public to the most private, thus making the relationships from room to room and house to garden also important.

Some gardens require complete privacy. For example, a bathroom shower can be dramatically enhanced if it opens onto a private outdoor space. I had the opportunity to work on a city property with a secluded rooftop garden. Bounded by a high pri-

vacy fence, the space provided ample sunlight and air to the master bedroom and bath, while maintaining complete privacy from neighboring buildings. It was exhilarating to take a shower with the door open and step outside to dry off.

It's also possible to make the mistake of enclosing the garden too much and feeling completely isolated. To avoid this, I like to maintain a strong connection with a room in the house or with a view. If there is no view, I try to subdivide the garden into more than one space. Such a division may merely be a suggestion, but it adds dimension to the garden.

Sometimes, it's more difficult to establish privacy than you think. I found that out in a

recently completed city garden in Washington, D.C. I was asked to design a formal garden that would complement the grand architectural style of the house and accommodate large luxurious parties. I knew that most of the available space would be needed for the garden and not much would be available to screen out the large neighboring homes. I created a setting by excavating the hillside adjacent to the house. The main feature is a wall-mounted fountain set into a high stone retaining wall that ends in a grand stairway. Edged with a planted border, a terrace wraps around the house, extending the formal living room into the garden. A new evergreen hedge separated the space from the neighbors. When the installation was completed, the garden still lacked a level of privacy from the main and neighboring houses. To solve the problem, we designed and set up a removable tent to suggest a room within a room. Now one can enjoy the surrounding gardens without feeling on display.

Intimacy usually suggests a small garden space, but if the space is large, as it was in the Washington, D.C. garden, intimacy can still be achieved. The retaining wall that defines the outdoor room changes during the day as shadows are created from the columns and corners in the wall face. The warm color and natural texture of the stone invites you to come closer. A fountain adds the sound of dripping water while plantings soften the masonry. In combination the elements result in a very livable outdoor garden room.

Ultimately, the success of a garden has as much to do with how people respond to the setting as it does from the display of beautiful plants. As a garden designer, I always begin with the space and focus on the mood and feeling of the place. I also think about how people will use the garden. I know that invariably, I have control over the level of privacy and degree of intimacy. There are no rules to follow; no magic dimensions or proportions to insure success, just a developed sensibility. I learned long ago that to design effectively, you must practice looking critically at each garden you visit. It's not enough to decide you like something. You have to find out why. Once you figure that out, you can repeat the effect again and again.

Rodney D. Robinson lives in Wilmington, Delaware, and has practiced landscape architecture for the past 20 years. He is principal of the firm Rodney Robinson Landscape Architects, where he and his staff design both public and private gardens.



The Solace of Nature in the City

The city dweller's quest for intimacy with nature

by Duane Binkley



Across from the house where I grew up stands a thick stretch of woods, barely contained within miles of black chain-link fence. The trees in those woods are primarily oaks, four or five stories tall, skirted along the edge of the fence by occasional clusters of white dogwoods and stray, mitten-leaved sassafras trees. Hollies, introduced by the woods' huge population of birds, appear randomly among the trunks of the elder oaks, as do rambling colonies of rhododendrons, which light the otherwise plain green and brown woods with pale lavender blossoms in late spring. Gray squirrels by the hundreds make their homes within these trees, as do a few absurdly waddling opossums. Rare, but still present, are red foxes, whose fleeting forms are glimpsed at twilight only once or twice over the course of an entire summer.

As a child, learning to scale the chain-link fence was as much a badge of boyhood honor as learning to ride a two-wheel bicycle, as much as learning to whistle or blow fat pink bubbles of chewing gum. Over that fence, deep within these woods, exist my first, strongest memories of an intimacy with nature: atop the bridges and within the walls formed by toppled oaks, within the rhododendron fortresses, I learned a fascination with, and an appreciation for the solitary communion with the natural world.

As a teenager, I took advantage of all of the freedom that a ten-speed bicycle afforded a boy not yet old enough to earn a driver's license, inheriting a job that my older brother had once held at a farm several miles from home. Chilly summer mornings, before the dew had dried on the grass of the neighborhood lawns, I pedaled the roller coaster back roads that define Southern Chester County, bordered by embankments dense with the ramrod

The author finds refuge from the noise and the crowds of the surrounding city in the cemetery at Old Swede's Church. An L-shaped brick and slate bench, well hidden within the heart of the cemetery, provides the perfect place to escape into the pages of a good book.

photo by Ira Beckoff

scapes of marmalade-colored daylilies. At one spot along the journey, the branches of ancient osage oranges, planted on both sides of the road that bisected a farm, converged overhead like buttresses, forming a cathedral of dappled light that stretched for nearly half a mile.

Once I arrived at the farm, I pedaled down a dust and gravel road, not much more than two ruts that ran through the farm, past acres of corn, through more acres of the whitewashed trunks and carefully pruned branches of apple, pear, peach and plum trees. Every afternoon, a crew of five of us headed out to the fields of corn on the back of a battered red pickup truck covered with equally battered wooden crates. One person drove the truck along the edge of the field, while two older men disembarked and picked the corn, followed by two boys who carried the boxes, returning them to the truck as they filled with the fragrant corn. Although the work was exhausting and dirty, there were two great rewards. One reward was simply riding back to the small store where the produce was sold, feasting on the freshly picked corn, so sugary that every ear I've eaten in the past 15 years has paled in comparison. The other reward was stepping into the great sea of green that comprised the corn field. A few steps in either direction away from the other crew members, and the field engulfed you, no evidence of the existence of another human being except for the occasional grunt of one of the older men as he twisted a reluctant ear of corn from its stalk.

Philadelphia has been my home for the past six years; finding such immediate or encompassing access to the communion with nature within the city hasn't been a simple task. In all but the first of those years, I've lived in houses with large backyards that a housemate and I have determinedly transformed into gardens. While a garden in the back of a house in the city isn't as grand in scale as the woods, the orchards, the fields of my childhood, the access to earth, the transformation of barren backyards into gardens has been a satisfying connection with nature in its own right. Now, however, the era of cohabitation and shared gardening is coming to an end. My housemates and I, a trio of friends who met in college, have decided to strike out on our own in search of more private living accommodations. For the past six weeks, in my search for a new home, I've been forced to confront the fact that for the first time in five years, I will probably be without a garden of my own. In exchange for the luxury of having an apartment bereft

I also realized that this would probably be my only opportunity to take sole possession, however fleeting, of one of the most desirable pieces of Philadelphia real estate in the purest state I'd ever seen it.

of roommates, I'll be surrendering the great, simple pleasure of stepping out the kitchen door into the backyard on a cool summer's morning to see which swollen buds have opened overnight, which berries have ripened under the previous day's sun to the point of sweet readiness. Now I am destined to rejoin the ranks of those who garden on windowsills, in window boxes or sidewalk whiskey barrels. I take consolation in the knowledge that I can, and probably will, apply for membership in a com-

munity garden, but for me, a large, selfish part of the joy of gardening is the immediate gratification of looking out a window, stepping out a door, enveloping myself in plants that I have germinated or propagated, pampered, pinched and pruned, enjoying them in all the privacy that four walls and a gardener's imagination can provide.

Luckily, the absence of a backyard doesn't sentence urban dwellers to lives without access to nature. Philadelphia is a city determined to be green. Its backyards, sidewalks and buildings are under constant threat of unauthorized reforestation by the offspring of trees such as the tenacious tree of heaven (*Ailanthus altissima*), whose seeds will germinate and prosper on a building's window ledges, whose roots will cause the macadam surface of a parking lot to ripple like the surface of a pond into which a pebble has been skipped. Fortunately, the city is filled with more



photo by Adele Greenspun

thoughtfully planted and maintained spaces, spaces more appropriate for human activity than window ledges and parking lots. A lazy stroll across Rittenhouse Square or a run along Kelly Drive on any warm day is all the evidence needed to illustrate the innate human desire to interact with the natural world, to experience it on a more intimate level. But the presence of hundreds of other people, all in competition for the same intimate experience all at the same time, is detrimental to the individual's interaction with the natural world. As in any relationship, it is much simpler to concentrate when nature, and not the distractions caused by swarms of other athletically inclined people, can be the sole focus of your attention.

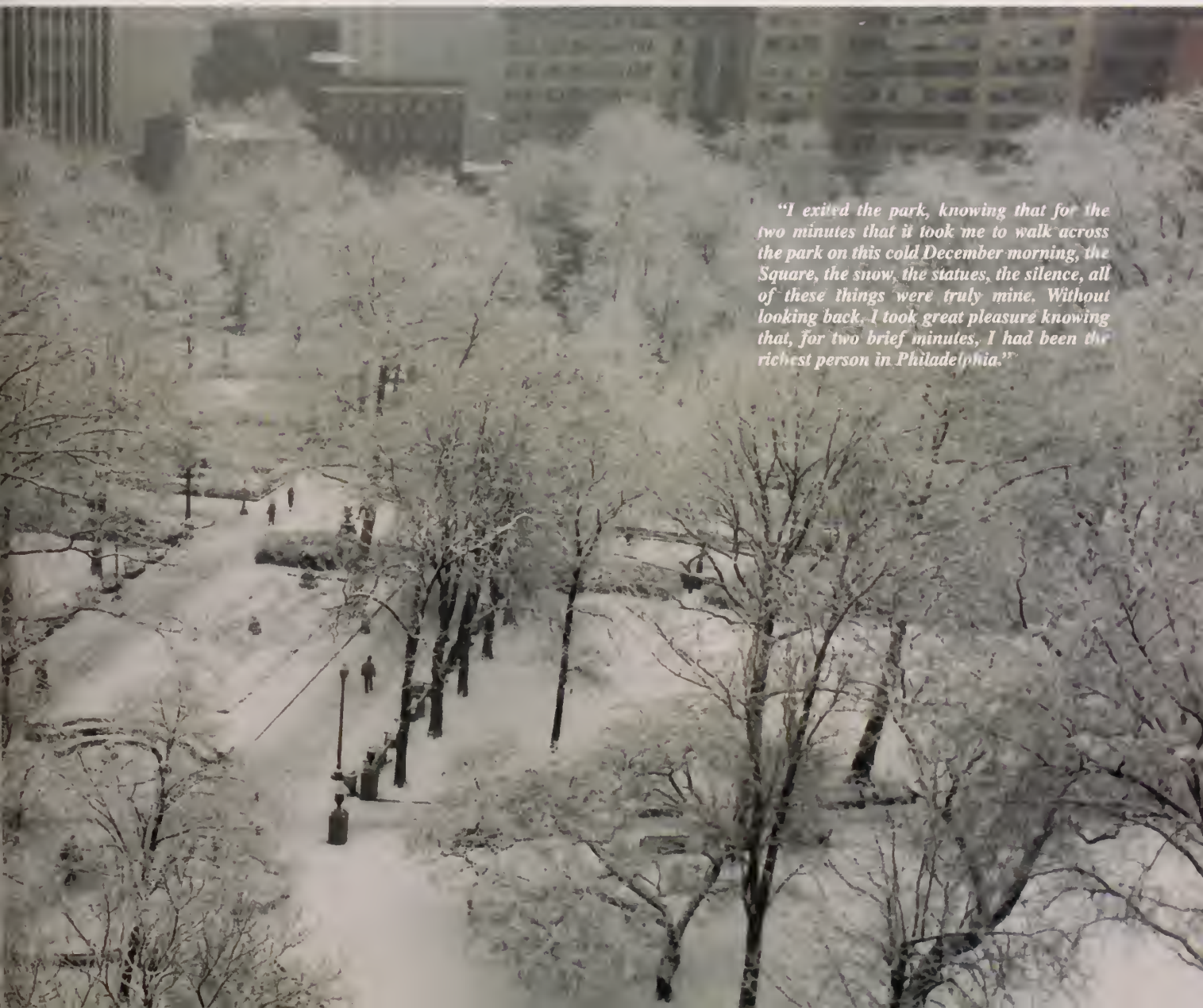
Because human beings greatly outnumber green public places within the city, the challenge to achieve closeness with nature must be met with determination and cre-

ativity. In my six-year residency, I have explored Philadelphia by bicycle and on foot, at paces slow enough to allow me to discover some private spaces whose existences I never would have suspected while trapped behind the steering wheel of a car. In my explorations, I have found that the smaller the street, the greater the potential treasure that lies therein. It is the tiny cobblestone streets, the alleys that open onto smaller alleys, the seemingly dead-end passageways that have held some of the most intimate discoveries. A gate, carelessly left open, once afforded me a glimpse of a lush Old City sculptor's garden that I'd never seen before, and will probably never see again. A zigzag trip down a few cobblestone alleys took me into a secluded Queen Village courtyard draped in the pendulous amethyst blooms of a generations-old wisteria vine. Both of these unexpected discoveries depended on my presence in the

right place at the right time. An hour later, and the Old City gate would have been securely locked; a week later and the wisteria blossoms would have been spent. Sometimes, intimate experiences are merely a matter of persistence and fate.

The haunting beauty of a cemetery

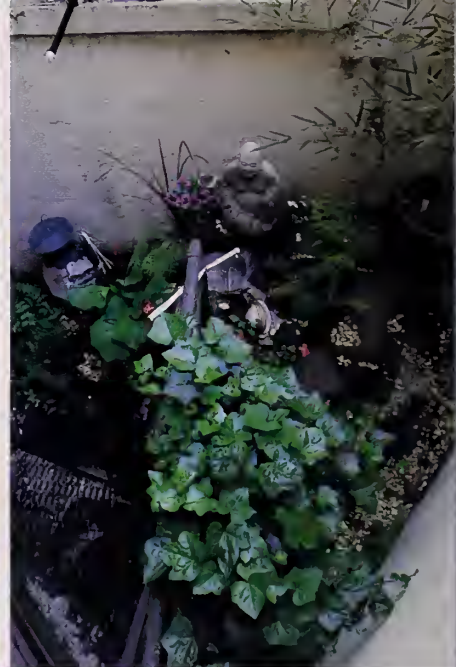
Counting on luck and circumstance isn't always a reliable or rewarding method of finding intimacy in an urban garden. It is far more rewarding to find a reliably private place, or to take advantage of a reliably quiet period of time in a less private place. For the past two and a half years, I have been lucky enough to live two blocks away from Old Swede's Church, an historic complex of simple, beautiful brick buildings and a small, quiet cemetery, all enclosed within a high brick wall. Nestled between the endless, noisy flows of traffic of both Delaware Avenue and I-95, Old Swede's is



"I exited the park, knowing that for the two minutes that it took me to walk across the park on this cold December morning, the Square, the snow, the statues, the silence, all of these things were truly mine. Without looking back, I took great pleasure knowing that, for two brief minutes, I had been the richest person in Philadelphia."



The late afternoon sun gently bathes orderly rows of time-worn tombstones in pink and golden light in the cemetery at Old Swede's Church.



The sound of trickling water draws curious pedestrians to visit this tiny basement-level garden in Center City. Confined by square footage and limited sunlight, the garden is an outstanding example of what creative and determined gardeners can achieve in less than stellar locations.

a holdout from a bygone era of greater simplicity, a welcome pocket of quiet and solitude sandwiched between two contemporary concrete rivers of sound and speed.

In the spring, when the weather grows warm enough to allow it, I take advantage of the sun's increasingly strong rays, tuck a book beneath my arm and walk to the cemetery at Old Swede's to read. I enter the cemetery through a pair of iron gates on the property's western side. Although a sign posted on the gates requests that dog owners keep their pets leashed while on the property, few actually do; adjacent to the cemetery, there's a large grassy field, safely enclosed within the brick wall, in which dogs chase each other in loping, neighborly arcs while their owners stand in groups of twos or threes, watching enviously. Once inside the property, a herringbone brick pathway, worn smooth by decades of acid rain and the footsteps of countless tourists, leads through a patchwork hedge comprised of yew, barberry and privet, each shrub maintaining an individual height and shape within the hedge's loose structure. In some places, ivy creeps onto the pathway from underneath the hedge; in others, thick clusters of violets peek up at the springtime sky.

The cemetery is bordered on the eastern and the southern sides by eight towering sycamores, whose graceful, massive limbs arch out over the pathway, the shrubs, the worn, rounded tombstones below. Unlike the sycamores that line streets in various

parts of the city, these trees have had unlimited access to both soil and sky, their trunks and roots ungirdled by sidewalks and tiny tree pits, their branches unsnared by power lines, unsnapped by passing trucks. Each of the trees' trunks, close to 10 feet in circumference, is covered with the same ivy that lives beneath the hedge, to the height of 10 to 12 feet. Contrasting with the ivy's deep green leaves is the sycamores' smoothly peeling bark, in shades of gray the colors of a flock of mourning doves. Between the bases of the trees, the ivy forms a thick, uneven carpet, nearly covering a few small, forgotten tombstones that have been dwarfed by time, nature and memory. Many tombstones here date from the 18th and 19th centuries, although the script on many of the stones is now nothing more than faint shadows, slowly worn away by decades, or centuries, of exposure to the elements.

In roughly the center of the cemetery, a clearing holds two L-shaped benches, made of brick and slate. While standing in the middle of the clearing, I can easily look out over the hedges and watch the few people who enter the cemetery to visit the church or the grassy field; once seated on the bench, or on the ground within the clearing, there is a sense of complete enclosure, seclusion. If you don't know about the existence of the clearing, you can't detect the presence of a person therein, and the presence of those who exist outside the clearing is easily forgotten, with the exception of the

faint, muffled hum of the nearby traffic.

In the spring, when temperatures can still swing somewhat wildly over the course of a single day, the clearing is bathed in sunlight. Even on cool days, an extra sweater and a sunny afternoon are enough to maintain a comfortable temperature. By summer, though, when the temperatures have steadily climbed to oppressive levels, the limbs of the overhanging sycamores have leafed out completely, shading the clearing nicely from excess heat. Here, safely enclosed within walls of brick, hedges of yew and barberry, beneath the canopy of sycamore limbs, it seems that time passes at a pace much slower than in the surrounding city.

Although nothing man-made is permanent, as evidenced by the stooped shoulders of the slowly shrinking headstones, the worn brick pathway, the rippling imperfections of the church windows, there is a sense of timelessness here. But this sensation exists only within the sanctuary of the cemetery's walls; as I step back out onto the street after a few hours of reading in the cemetery, there is always some initial jolt, some ugly reminder, that I've rejoined the rapid-fire external world: the impatient blaring of a car horn at an intersection, the eruption of a cellular phone during a quiet movie. These noisy demands that time move more quickly than it already does, remind me just how valuable the time spent alone within those walls is.



photos by Ira Beckoff

A back gate left open invites visitors to admire this thoughtfully designed and planted Center City garden. The garden, a gem in green and gold, is well off the beaten path, and, not surprisingly, the pride and joy of Joseph Baker, a most hospitable PHS member.

At 4 am

While Old Swede's is a reliable *place* for me to find a sense of intimacy with the natural world, I've also found that **time** can be an equally important component in the quest. For the past two years, I have had the debatable luxury of starting work at 4am. As I'm enjoying my second cup of coffee, the majority of the city's inhabitants are still fast asleep. During the course of my daily bicycle commute from 2nd and Carpenter to 19th and Market, the pre-dawn streets are rarely contaminated by the presence of cars or buses; the facades of the buildings that I pass are never hidden behind flocks of harried pedestrians this early in the day. At this hour, I feel a connection with the city that transcends a familiarity with the names of her streets or the locations of her more famous historical and cultural monuments. There exists an intimacy in having an entire city to yourself, in traversing the maze of concrete and brick that comprises her body, in acknowledging both her beauty and her blemishes, in watching her burst into blossom in the spring, grow lush and ripe in the summer, turn scarlet and gold in the autumn, and fall gracefully into the barren stillness of winter.

It was in the pre-dawn hours that I had one of my most intimate, one of my more memorable experiences, in one of the most public gardens in the city. Three winters ago, in early December, I had the opportunity to apartment sit for a friend who lived

in the Dorchester, a building that dominates the southwest corner of Rittenhouse Square. I awoke one morning at 5am to discover that about half an inch of snow had fallen overnight, and was continuing to gently, steadily whitewash the city. Knowing the inclination of Philadelphia snow to turn to slush under layering of rock salt and boot-ed pedestrians, I quickly dressed and headed down to the Square to see the city before it was shoveled, salted and slushed.

When I stepped out of the lobby of the building and onto the still unshoveled sidewalk, I found that the streets were nearly empty. A bread truck rumbled westward on Walnut Street toward University City; a taxi cab, dishwasher-gray in the faint morning light, slowly rounded the corner of the Square north onto 18th Street. I crossed the street to the southwest entrance of the Square and paused; no other footprints preceded mine into the snow that coated the paved walks that crisscross the park. At this early hour on a winter morning, the park was nearly monochromatic, painted in muted shades of gray. The only color that was evident was the dark green of the japanese and english hollies that stood behind the balustrades at the Square's entrance. The unshivering greyhound statues that silently guard the Square were wrapped in white blankets.

No motion was evident but the steadily falling flakes of snow and the puffs of breath that escaped my mouth and dissolved into the cold air. I hesitated before stepping inside, not wanting to be the person whose footprints destroyed the uninterupted whiteness of the pathway. I realized that, eventually, somebody had to be the first to enter and alter the appearance of the heretofore pristine park. I also realized that this would probably be my only opportunity to take sole possession, however fleeting, of one of the most desirable pieces of Philadelphia real estate in the purest state I'd ever seen it.

I stepped into the Square, walking under the branches of the kentucky coffee tree, whose fat seed pods hung like peacefully slumbering bats from the tips of the tree's snow-covered branches. Walking further into the park, passing the statue of the nanny goat, her forehead polished by the caresses of the children who play on and around her every day, I decided not to turn around to see the footprints that I'd left behind. Wooden benches coveted by har-

ried businesspeople during their summertime lunch hours, all sat vacant, covered with cushions of snow. I passed under still, silent deciduous trees, the graceful architecture of their limbs revealed by the absence of their leaves, the upper surface of each branch, nearly black in the dim morning light, highlighted by a thin layer of snow. Chest-high yews, sheared carefully into conical forms, looked as though they'd been crafted with confectioner's sugar. Dwarf japanese hollies, surrounding the then-vacant bed in which the yews stood resolutely, looked like white frosting piped around the edges of a wedding cake. As I reached the center of the Square, I realized that I'd made a mistake, that I'd crossed the first half of the park too quickly. Within the next minute, if I continued to walk at the same rate, I'd be standing outside the northeast entrance to the Square, my walk destined to begin to fade into memory the moment that it ended.

I slowed my pace, but it was still only a matter of seconds before I reached the statue of two children and a sunflower, and the balustrade that marked the Square's northeast corner. I exited the park, knowing that for the two minutes that it took me to walk across the park on this cold December morning, the Square, the snow, the statues, the silence, all of these things were truly mine. Without looking back, I took great pleasure knowing that, for two brief minutes, I had been the richest person in Philadelphia.

I'll sign a new lease this week, for an accurately advertised, spacious, sunny studio in the city's Bella Vista area. Two of the apartment's main selling points were deep, sunny windowsills, perfect for my burgeoning collection of succulents, and a landlord who seemed truly excited by my suggestions of window boxes and whiskey barrel planters at the building's front door. Although, for the time being, I will no longer have such easy access to the intimate solitude that I experienced in the woods of my childhood and in the backyard city gardens I've enjoyed for the past five years, I take solace in knowing that the opportunities for those experiences still exist, even if I have to look for them on tiny cobblestone alleys or early weekend mornings when I will gratefully borrow the city from my sleeping neighbors.

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Duane Binkley, a recovering horticulturist, studies English at Temple University. He is currently employed in the financial sector and is hard at work on his first novel.

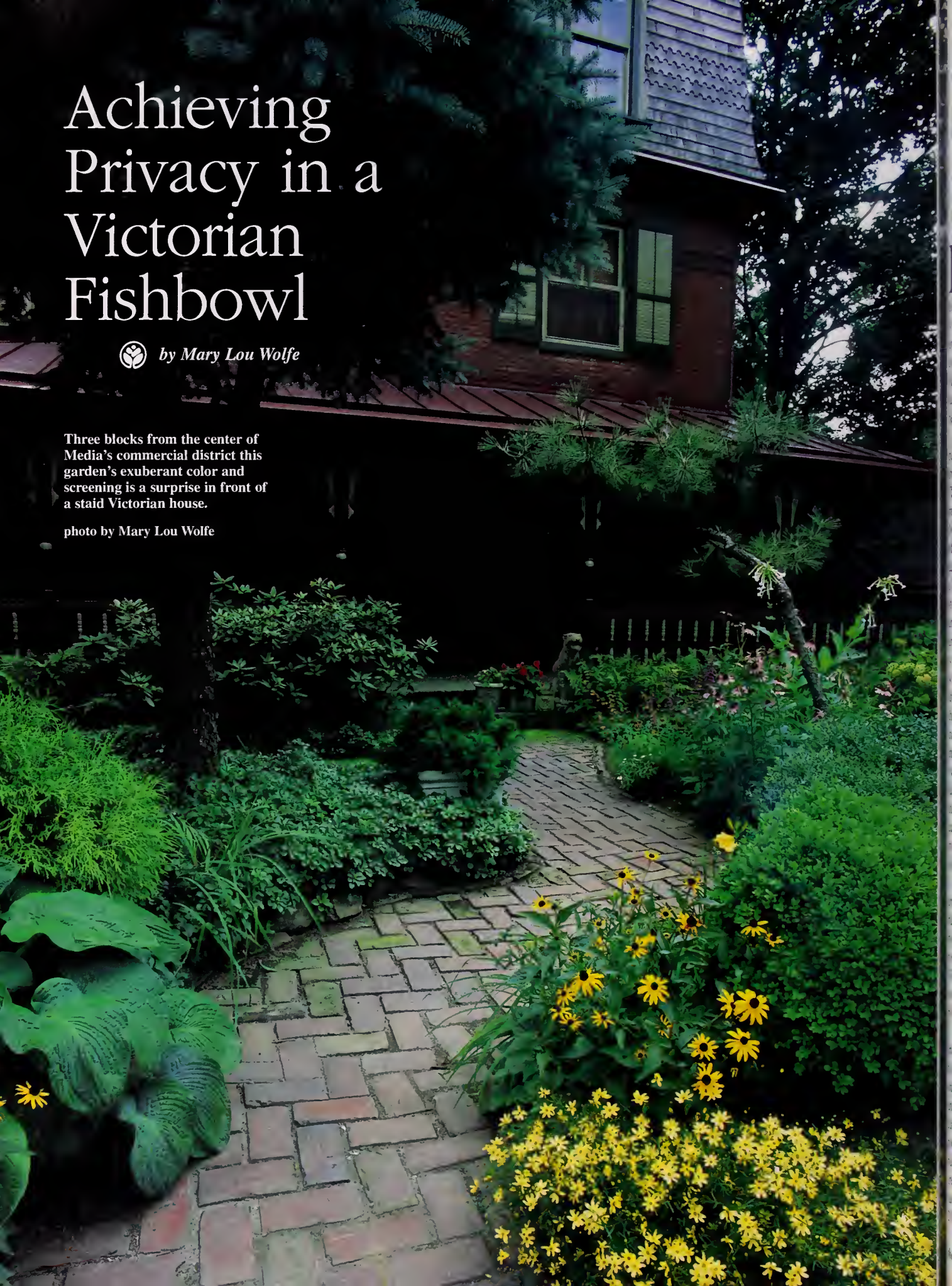
Achieving Privacy in a Victorian Fishbowl



by Mary Lou Wolfe

Three blocks from the center of Media's commercial district this garden's exuberant color and screening is a surprise in front of a staid Victorian house.

photo by Mary Lou Wolfe





Top: House as it looked when Christina and André's Valdés-Dapena purchased it in 1985. **Bottom:** At the driveway entrance, mounds of rudbeckia, coreopsis, asters, cleome and butterfly bush almost obscure the two-ton rock that commemorates a 20th wedding anniversary.

If you lived in an apartment three blocks from the borough of Media's commercial center, you might have looked down from your third-floor deck at an old Victorian house and yard undergoing an amazing transformation. Years ago you could glimpse children, grownups, dogs, visitors, and even, briefly, a helicopter landing pad. Each year all this activity has been harder and harder to see.

The decreasing visibility for neighbors is partly explained by the two and a half years that homeowners Andrés and Christina (Teenie) Valdés-Dapena spent in Japan on a medical assignment. Andy's work as a U.S. Navy pediatrician was mainly on the Island of Okinawa, but the young couple, with daughters Letitia, Antonia and Anya, travelled extensively in Japan. Teenie was struck by how small the properties were and how inventively people created beauty and privacy in the limited areas. When she wheeled and walked her daughters through winding streets in Naha, Kyoto and Tokyo, she marvelled at ingenious bamboo fences, the asymmetrical siting of paths and groupings of pots and garden ornaments. She was impressed that real privacy was created over and over in very tight quarters. As the family travelled in Japan, Teenie absorbed the whole scene, from tea houses and carved stone lanterns, to water stones and moss gardens. She's never been the same since.

When the Valdés-Dapena's assignment ended in 1985, they were able, on return, to buy Teenie's grandfather's 1880 Victorian house in Media. This three-story mansard-roofed structure was next to a similar Victorian where Teenie had grown up. She was well acquainted with the neighborhood.

Now, on returning from Japan, she saw it through different eyes. Grandpa Mountz's house looked proper, somewhat shabby and entirely conventional. The plants were few and uninteresting except for two Japanese cut-leaf maples and red oaks that, with tulip poplars, defined the rear property line. The backyard felt like a fishbowl. Houses in this area were built before many zoning laws had been enacted. Their lot, a long, narrow 200 ft. by 60 ft., was surrounded by four

Achieving Privacy in a Victorian Fishbowl

photo supplied by Valdés-Dapena



Top left: Beginning to dig hole for lap pool in September 1988, as seen from second-floor roof. **Top right:** A 32-ft. x 8-ft. stretch of water mirrors the rear view of this 1880 Victorian house. The plantings around the pool provide privacy and also shade the water enough to require an auxillary heating system, which extends the swimming season considerably. **Bottom:** From a rooftop perch, this wide-angle view exaggerates the width of the Valdés-DaPenas' back yard, but shows how ornamental grasses, trees and shrubs separate the pool from the service entrance and sunny flower bed.

houses and two apartment complexes. A public walkway giving access to one of the three-story apartment buildings was less than 6 ft. from the walls of their house.

This young family needed screening, perhaps a bamboo curtain, a really big one. Teenie and Andy went to nearby Upper Bank Nurseries for advice. Owner Wirt Thompson suggested *Phyllostachys anreosulcata*, commonly called yellowgroove bamboo. They purchased 10 small divisions. Although designated a Zone 8 plant, this bamboo, except for one winter of partial dieback, has proved hardy in the 12 years since the Valdés-Dapena planted it. Today, it forms an evergreen curtain 20 ft. tall that needs little care except tying up vagrant branches, removing dead stalks, and cutting off excess vegetative shoots in spring. First, these divisions were used to start a bamboo wall on the opposite side of the yard. Now, Teenie calls it "our traveling plant" as these spring divisions are shared with gardening friends. The bamboo's travels on the Valdés-Dapena property are controlled on one side by the apartment's cement walkway and on the other, by an asphalt driveway.

When they purchased the house in 1985, the only memorable features on the street side were an ancient 60-ft.-long brick sidewalk, a granite hitching post for long-gone horses, and a huge, sheltering front porch. It didn't take long for Teenie to introduce some asymmetry by digging up the front entrance walk and rearranging its lovely old bricks into a gentle sort of "S" curve leading to the front steps. Then, more echoes of Japan appeared. Near the front sidewalk a Japanese stone-like lantern nestled beside a mugo pine (*Pinus mugo*) and a large-leaved hosta (*Hosta sieboldiana* 'Elegans').

A laughing cement tiger, captured near Quakertown, guards the front porch steps where substantial pots of deep red tuberous begonias echo the color of the brick walk. On a 20th wedding anniversary not long ago, Andy added his Japanese touch. A huge two-ton irregularly shaped granite boulder was lowered into place beside the driveway walk. What a way to celebrate an adventurous marriage.

On the street side, Teenie tied together these various Far Eastern touches in a very bold un-Japanese way. She planted great mounds of yellow rudbeckia and coreopsis, purple cone flowers, an arching butterfly bush (*Buddleja davidii* 'White Profusion'),

Years ago you could glimpse children, grownups, dogs, visitors, and even, briefly, a helicopter landing pad.

and cleome. These sweeps of color were backed by Japanese black pine (*Pinus thunbergii*), boxwood, and two handsome potted *Cryptomeria japonica* 'Globosa'. The effect, on this quiet street, is dazzling, though one neighbor said, "Teenie, I'm sure you don't grow weeds but those sure look like weeds." Her dad, Jerome Lynch, has pronounced the whole place "A jungle." It's one carefully plotted and artfully controlled jungle.

Adding water to the garden

So, what goes on in the backyard jungle? These hard-working gardeners and their three young daughters began to think about water in the garden. Teenie just wanted a hot tub or a small, irregularly shaped pool but Andy wanted a real lap pool. When he investigated, installation costs were quoted at around \$20,000. Furthermore, contractors, noting the small space and difficult access were not even interested in this job. One day at work while talking to the father of a young patient, Andy was bemoaning his lack of pool progress and the high estimates. This confidant, who was in the construction business, remembered an article in a "Handyman" kind of magazine that described a plan for a pool 32 ft. long by 8 ft. wide by 4 ft. deep. Teenie did a library search and eventually found the *Mechanics Illustrated* article, which directed them to a \$10 plan from a California firm, Sunland Pools. When they received the plan, the first sentence read, predictably, "Dig a hole 8 ft. by 32 ft. by 4 ft. deep."

In the fall of 1988 they plotted out the pool's dimensions and began digging. After only a few exhausting hours they took Teenie's dad's suggestion to hire someone with a backhoe to do the excavating. In one half day, the backhoe operator produced the prescribed hole and also a mound of dirt that took Teenie and Andy months to redistribute. There is a 3-ft. grade change sloping down from the house toward the oak and tulip poplar border. While Andy built the cinderblock walls of the pool, Teenie distributed the excavated dirt to grade the slope between pool and driveway. This fill

also disguised the mechanics of the pool's plumbing. Teenie and Andy rented a cement mixer and kept it going for what seemed like months. Finally, in April, the pool was completed. Unfilled, it looked like a helicopter landing pad. Andy couldn't wait to fill it and try it out, so he and Teenie's dad took the plunge on a brisk 1989 Mother's Day. It was short, sweet, and achingly cold.

Andy built a narrow deck surrounding the pool. Using windows discarded by a neighbor during renovations, he constructed a small teahouse-like building that stores pool maintenance equipment and provides changing space. Everything around the narrow black-bottomed pool from the fence, deck, and teahouse, to the chairs, is stained a soft, weathered gray. It's an elegant unifying treatment for a small space. "The entire pool installation, if my labor is worth nothing, cost less than \$5,000," says Andy. Framed by a tall *Stewartia pseudocamellia*, several *Acer palmatum*, and various ornamental grasses, the pool is shaded enough to be a bit chilly. Five years ago, Andy installed a gas heater and the whole family pronounces the pool a smashing success.

I'm not sure what the apartment tenant can see from the third-floor deck these days. The bamboo hedges and tall trees have made this lively yard quite private. The noises from what looked like a helicopter landing pad are definitely from a pool. The three dogs still bark and daughters come and go.

There will be something to see at the front of the house. When I asked Andy what the next Valdés-Dapena project would be, he answered "Teenie is spending the summer moving soil." She's going to construct a berm near the Japanese lantern. It will provide more height and privacy at that corner of the property adjacent to her dad's house. Teenie has just completed the three-year program offered by the Arboretum of the Barnes Foundation. She also volunteers regularly at Swarthmore's Arboretum of the Scott Foundation. She's full of knowledge about new plants to try and landscaping ideas to consider, so there will always be something to watch at this Media jungle.

Mary Lou Wolfe gardens in Delaware County with her husband Lindsay on an old farm property. They share the garden with deer, daschunds, foxes and cats and have converted an old chicken terrace into a sunny rock garden.



Treehouses:

Refuge for the Adult and for the Child

 by Richard L. Bitner

Don't ask. Please. If you need to know why an adult builds a treehouse you are probably the kind of person who would ask a rock gardener why they want to grow *Meconopsis*. But even famous people have done it: Mark Twain leased the Wave Hill estate (now a wonderful public garden along the Hudson in the Bronx) from 1901-1903 and set up a treehouse parlor in the branches of a chestnut tree on the lawn. He wrote "I believe we have the noblest roaring blasts here I have ever known on land; they sing their hoarse song through the big tree-tops with a splendid energy that thrills me and stirs me and uplifts me and makes me want to live always."

None of the treehouse owners whose stories follow spoke of the hoarse song of the wind, and, sadly, there are no more chestnut trees, but the owners would all agree with Mark Twain about the good feelings and energy they experience from their structure. "A place of escape"; "something I always wanted as a child"; "a way to be closer to nature"; explanations offered — or as five-year-old Meghan said "I like the sound of the birds, and when I am in my treehouse I have warm feelings"

The longer we remained in this enchanting place the more did it charm my fancy; and if we could but manage to live in some sort of dwelling up among the branches of those grand, noble trees, I should feel perfectly safe and happy.

Johann Wyss, *The Swiss Family Robinson*, 1813

My own longing for a treehouse originated from my favorite childhood book *Swiss Family Robinson*. So with the final window replaced on my mid-19th century farmhouse, I asked my carpenter one day two years ago (trying to sound casual, but knowing if I didn't do it now both he and I would be too feeble to crawl around a tree 25 ft. in the air): "Paul, how would you feel about building a treehouse?" When I saw his smile I knew that we were on our way. And like so many other projects that

The author wanted his treehouse to be a part of the top of the slope, but not to dominate it. In a certain way he wanted it to look as though it belonged there, like a natural outgrowth of the tree itself.



photos by Richard L. Bitner



I've told Paul wouldn't take much of his time, it became a monster project spreading over weeks and evolving from a simple platform surrounding a tree to an insulated haven with electricity, a wrap-around deck and brass fixtures.

The Bitner treehouse

Just exactly *how* we would design and build this treehouse I hadn't bothered to figure out, but where it would be was certain. I live on a sloping 12-acre cul-de-sac at the top of a ridge. I wanted the treehouse at the very top of the land where I could look over my buildings and across the ponds down through a long valley to the mountains beyond. The view would be best in the spring, but during the summer the dense foliage around the house would shelter and cool it and in the fall the foliage color of the hickories and poplars would envelop it. One doesn't dwell on the problems of transporting scaffolding and 12-ft. long 4-in. by 6-in. timbers up a steep slope after a rainstorm.

Since I'm the bookish type, one of the nice things about a new project is the opportunity to read up on it, create a file of notes and clippings, and feel authoritative about something for which I've had no practical experience. I found one book (*Tree Houses*, Peter Nelson, Houghton Mifflin, Boston, 1994; ISBN 0-395-62949-7). The treehouse described required a football team of builders and serious hoisting-things-up-into-a-tree type equipment. Not to mention a large budget (little did I know!). Nevertheless, it did seem apparent that treehouses (those actually up in a tree rather than simply leaning onto it) could be built *around* a tree supported by umbrella-spoke-like timbers underneath, or *between* two trees. Between two trees is more flexible in design, somewhat easier to build, and produces a more stable treehouse. I decid-

ed mine would surround the tree.

I wanted the treehouse to be a part of the top of the slope, but not to dominate it. I wanted it to look like it belonged there, like a natural outgrowth and expansion of the tree itself rather than a building suspended between two trees. I wanted to feel drawn to it, but once there be aware only of the nature surrounding it.

Paul took the book home overnight and came back the next day with a pencil drawing of how he thought he could create a platform to support the house. That was the sum-total of the advance planning on paper. Unless you plan to have Paul build your treehouse (forget it; I wait a year to get him for two days), I suggest you prepare better than I did. (For sound advice on building your treehouse see box on page 21.)

My treehouse was built. It took shape a few days at a time over a period of months. Three sections of 12-ft.-high scaffolding were erected to surround the tree and all materials (including 4-ft. by 8-ft. sheeting and windows) were slid up a ladder or were hoisted by hand-rope. Paul brought in two young carpenters for one day to help erect the spokes and another helper for some of the framing; otherwise he and I built it. Each day we would make decisions about the next step and a list of supplies I would need to buy or scavenge. A friend who is fearless put on the roof shingles while tethered to the tree. Besides the location, my favorite features of the treehouse are the deck, which completely surrounds it, and the interior ceiling. I wanted the ceiling rafters to be arranged to imitate the veins on the underside of a leaf. One day I hope to have the walls painted with fantastic insects and creepy-crawlies.

My advice to pin on your refrigerator door if you're thinking of a treehouse-building project: "Think through every action when working in a tree."

Left: The ceiling rafters of the author's treehouse are arranged to imitate the veins on the underside of a leaf. **Right:** The author placed the treehouse at the very top of the land where he could look across the ponds down through a long valley to the mountains beyond.

"I love to listen to the sounds of the owls, screech and great horned, and to hear the squeaks of bats. During the day I can watch red-tailed hawks hunt mice and squirrels. It's nifty not only to hear the wind but feel its movement in the tree."

Nick Hemmerich

These (planks) we arranged side by side on the foundation of boughs, so as to form a smooth solid floor, and round this platform built a bulwark of planks . . . Our house was thus enclosed on three sides; for behind, the great trunk protected us, while the front was left open to admit the fresh sea breeze which blew directly in. We then hauled up our hammocks and bedding and slung them from the branches we had left for that purpose.

Johann Wyss, *The Swiss Family Robinson*, 1813

The Hemmerich Treehouse

As soon as my neighbor Nick, a disenchanted manufacturer who now creates housing for low-income residents, climbed up the scaffold and sat on the partial platform of my fledgling treehouse, he began making plans to fulfill his long-held thoughts of a treehouse. He remembered as a child his Oma's country house having a little cabin back in the woods. It had no amenities but he enjoyed its wonderful and mysterious space with his cousins. There were springs all around, and he used to build an outside fire and roast corn-on-the-cob. Nick admits it might be difficult for an urbanite to understand how someone living on 72 acres might want a place to escape to. He wanted, however, to remove himself from the luxury of the house, to a place to fill the need of the log cabin of his childhood. It would also, he said, add a new dimension to his (extended) garden.

Nick's treehouse is very different from mine. Not only was his vision different but he was able to learn from some of the frustrations I experienced and difficulties Paul had solved. The Hemmerich treehouse was also sited on the highest part of his property in a densely wooded, totally secluded area barely visible from the house. He cleared a small road around a pond and through the woods on which to transport the building materials on the front-end loader of a farm tractor. His treehouse was built by Skip Cross (Skip1@desuper-net.net), a carpenter and all-around tradesman working with an occasional helper over four weeks' time.

Like mine, Nick's treehouse is constructed entirely of pressure-treated wood. He decided, however, to support his structure between two sturdy oak trees. Skip built most of the framing of the treehouse in the barn during a very cold and windy March and then transported it through the woods and hoisted it up the scaffolding. His advice: it's a really neat thing to make a treehouse, don't be in a hurry, enjoy the process. And, he insists, be prepared to change your ideas as you go along. A computer buff, Skip searched the Internet and discussed treehouses with, among others, a man named Patrick in Ireland and a professor in California. This treehouse, however, had little in common with the one Skip built as a kid in Vermont in someone else's woods with old boards between branches and a rope to reach it. These adult treehouses require a craftsman able to work on instincts grounded in practical knowledge and long experience. He says the owner must be willing to work with the carpenter and accept many compromises. Although the



photos by Richard L. Bitner

Top: Nick Hemmerich's treehouse is located in a densely wooded, totally secluded area. It has porches on either end surrounding the oak trees that support it; one is screened in and the other features a ladder up to a still-higher crow's nest. **Bottom:** The screened-in porch area of the Hemmerich treehouse is especially enjoyable on a summer night.



framing is similar to an earth house, Skip says that except for the supporting beams, use lighter-weight materials when possible, e.g., 2 x 3's instead of 2 x 4's. The windows were castaways from another project and wood shakes were used on the exterior for low maintenance and compatibility with the forest setting. The roof is green enameled steel to blend in and to amplify the sound of forest rain.

Nick's design allows for much more available interior space (the 9-ft. by 9-ft. room has a futon, several chairs, a cooler, a small stereo, a space heater and four available electric outlets). There are porches on either end surrounding the trees, one is screened in and the other features a ladder up to a still-higher crow's nest. The screened-in porch area is especially enjoyable on a summer night with its protection from bugs. "I love to listen to the sounds of the owls, screech and great horned, and to hear the squeaks of bats. During the day I can watch red-tailed hawks hunt for mice and squirrels. It's nifty not only to hear the wind but feel its movement in the tree."

Nick says his treehouse never fails to impress a date, and he has held several meetings there with business associates who appreciated the outlets for their laptops but lamented the lack of a modem and fax. ("That's coming," says Nick.) His nephews, aged 6 and 8, love the height and call it a ship in the sky. They enjoy sleepovers because of the night noises and imaginary (not always) creatures in the woods. The boys enjoy going up the stairs and through the opening into a secret place. *Every treehouse owner agrees on the importance of sturdy stairway access to a treehouse, no matter how fanciful the design of the house itself.* However, mused Nick, "This adult-sort of treehouse seems to lose its appeal with today's children who find Nintendo more endlessly fascinating."

... [We] made a great improvement by completing the broad terrace supported on the arching roots of the trees - it was better floored - and rustic pillars and trelliswork sustained a bark roof, which afforded a pleasant shade.

Johann Wyss, *The Swiss Family Robinson*, 1813

The Melanio/Cross treehouse

While constructing the Hemmerich treehouse, Skip and his companion Riki got a hankering for their own treehouse. This third treehouse in the neighborhood reflects additional refinements and a completely different notion in both concept and design. "I wanted it close to the house for easy access to the kitchen for preparing food to serve in the treehouse" said Riki, an accomplished cook and baker, "and I insisted on easy, secure access for all ages - not to mention addressing my own fear of climbing to heights." She also insisted that the room surround the tree.

"I wish," said my wife, "that you would invent some other plan for climbing to the nest above us. I think that the nest itself is perfect - I really wish for nothing better - but I should like to be able to get to it without scaling that dreadful ladder every time. Could you not make a flight of steps to reach it?"

Johann Wyss, *The Swiss Family Robinson*, 1813

Skip's design is amazingly practical in every way. Although the tree is in its center, the house is not supported by the tree but by corner posts that define an open deck at

Left: The Melanio/Cross treehouse is very much part of their garden. With the tree in its center, the house is supported by corner posts that define an open deck at ground level.

Right: The cozy interior of the Melanio/Cross utilizes recycled windows and paneling and features a tongue-in-groove wooden cathedral ceiling.

The lights and windows are from the spring house and the chicken coop of Riki's late father's country estate, a meaningful connection for her that continually evokes fond childhood memories. She insists there was thumping in the walls of the treehouse from her father's ghost until the first cocktail party occurred there.



The Micciolo children's tree-house

There are three enterprising daughters in the Micciolo family who live on three and a half acres along the Main Line: Meghan, five; Emily, eight; and Caitlin, nine. It was Caitlin who begged her father, owner of Kryton Corporation, a remodeling firm in King of Prussia, for a treehouse and presented him with a drawing of her own design. It was a good plan. The sisters together selected the location, a spot where they could see a creek from the trees. The treehouse consists of a sturdy platform about 7-ft. high around two trees with a 4-ft. railing

Caitlin's Outdoor Girls Club; neighbor Teresa De Brey (pink tights); Meghan Micciolo (higher on ladder); Caitlin Micciolo (on platform holding her plan) enjoy their treehouse, a sturdy platform about 7-ft. high around two trees with a four-foot railing all around and a secure stairway.

ground level. The tulip poplar moves within the room. There are so many decorative touches to the treehouse that one scarcely notices the full-sized stalwart stairway that leads up to it. There is a tiny entrance gable leading to an 8-ft. by 12-ft. room with a tongue-in-groove wooden cathedral ceiling with a light and fan. The interior wall height was determined by the size of the paneling scavenged from another project. The lights and windows are from the spring house and the chicken coop of Riki's late father's country estate, a meaningful connection for her that continually evokes fond childhood memories. She insists there was thumping in the walls of the treehouse from her father's ghost until the first cocktail party occurred there. "We love the treehouse so much that we seldom use the house deck any more. I enjoy sitting in the treehouse with its screened windows listening to the fountains by our little garden pool. It's also a great place to have business meetings."

Riki and Skip's treehouse is very much part of their garden, and they are planning placement of this season's plantings based on the view of the garden from their perch in the branches.

all around and a secure stairway up to the platform. Tony Micciolo built the treehouse himself from pressure-treated lumber and some recycled cypress posts with Caitlin's help over several weekends. The girls love playing in their secret space although their mother Katie is able to keep an eye on them from their kitchen/family room. She says they frequently have family story-time in the treehouse and often picnic there in the shade during the summer. She has noticed that children tend to be better-behaved in the treehouse and keep it cleaner than their own rooms.

There is a girls-only entry-by-application ODGC (Outdoor Girls Club) group who use the treehouse. Caitlin devised a special questionnaire that must be completed by her friends to join. Sample questions are:

If you were bit by a snake what would you do?

- a. run home
- b. wait until someone got help

If there were a prickly bush in your way what would you do?

- a. cut them down with something
- b. move through gently

At present six members comprise the

group. Several boys of the same age in the neighborhood (not eligible for an application) sneaked to the treehouse and scratched "your fort stinks" on the post; fortunately, the evaluation disappeared in the next rainstorm. In the spring the girls were each given birdhouses to decorate as they wished for the corners of their treehouse. Meghan put lots of glitter on hers. "I like the sounds of the birds, and I like when the trees move." Emily admits that in the winter the treehouse is "creepy" because it's so quiet.

Tony Micciolo estimates the cost, with all new materials, for this sort of treehouse is about \$6/sq. ft. (does not include labor). He said it is especially important that the upright railings be no more than 4 inches apart and that the stairway be well made. The girls have not been permitted to sleep over because there is no hatch door at the top of the stairs where they enter the platform. That will be added soon, along with a second floor, which Caitlin has designed. "The second floor will create a roof for the first level," she explained.

Not long ago a writer and publisher asked Micciolo to rebuild his grown kids' treehouse. It had fallen into disrepair and required considerable restoration. It now serves simply as a wonderful ornament full of fond memories for the owner.

It's apparent that treehouses are special "intimate spaces" in the garden. They satisfy childhood dreams of adults, furnish interesting surroundings to entertain or confer, provide links between generations, and form a den actually close to nature. Nonetheless, like any gardening project they are always evolving, requiring additions and modifications. Every treehouse owner, like every gardener, has ideas for next year.

Shelves, tables, benches, movable steps, cupboards, pegs, door handles, and bolts - there seemed no end to our requirements . . . But in reality, the more there was to do the better. I never ceased contriving fresh improvements, being fully aware of the importance of constant employment as a means of strengthening and maintaining the health of mind and body. This, indeed, with a consciousness of continual progress toward a desirable end, is found to constitute the main element of happiness.

Johann Wyss, *The Swiss Family Robinson*, 1813

Materials List for a Simple Treehouse

(House 10 ft. by 10 ft., deck 10 ft. by 6 ft.)

All wood should be pressure treated if possible and all nails galvanized.

Beam

2	2x12x16
12	3/8x4 lag bolts

Floor

2	2x6x16
13	2x6x10
22	5/4x6x16
5#	2-in. deck screws
5#	3-in. deck screws
4	2x6x12 (outriggers)
8	1/4 x 3 1/2 carriage bolts, nuts & washers

Walls

20	2x4x14 (cut for studs)
12	2x4x10 (plates)
10#	16d nails (cement-coated sinkers)
10#	8d nails (cement-coated sinkers)
10	Pine RB&B 4x8 siding (or western cedar)
3	2-6 x 4-0 windows
1	3-0 x 6-8 prehung door exterior
2 gal.	Latex exterior paint or stain

Roof

11	2x6x12
4	7/16x4x8 OSB (decking)
2 rolls	15# roofing felt
1 2/3 sq.	roofing shingles
2#	7/8 roofing nails
2	10 oz. tubes Big Stretch Caulk (around tree)

Rail

4	2x4x12
2	2x4x10
15	2x2x12
1#	16d deck nails
5#	8d deck nails

Interior

11	1/4-in. paneling
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Cost for all new supplies: \$1,500

Building Your Own Treehouse

Paul Fourshee with Richard L. Bitner



Illustration by Ties Fromme

I (RLB) turned to my friend who manages a family building supply firm in Kentucky to devise a design for a basic treehouse that could be easily modified according to wishes and budget. Paul Fourshee (pfourshee@aol.com) has supervised the restoration of historic houses and has designed many theater sets and has a sense of place as well as knowledge of standard lumber dimensions. His treehouse could be built around one or two trees, or could be free-standing on four support posts. Our collective advice is:

- Never start a treehouse without plenty of thought and planning. Plan on building at least one full season away, which will give you time to "find" interesting parts and a sympathetic supplier. This is not a one-weekend project.
- You will need the standard assortment of building tools. Electric saw, drill, hammer, square, level, Band Aids, (Prozac, optional), plenty of iced tea and a nice comfortable lawn chair. You will also need a moderate amount of experience with these tools. A treehouse is *not* a good first project.
- Scavenger hunt for treehouse parts. Make it a game. Have fun with it. Don't take yourself too seriously - once you tell your friends of your project, they aren't likely to. Visit architectural salvage stores, junk stores and *especially* old established lumber yards. Poke around if they will let you. Be honest. Tell them you are looking for odd parts to make your treehouse interesting. They will likely have **very** odd parts stashed away accompanied by equally odd stories about how they came to be. Take time to listen, it's part of the process. Remember your windows and doors do not have to be standard sizes. Be flexible and imaginative.
- Stick with the local lumber yard. Don't bother going to the "big box" discount

depots. They only "have what ya see." Don't be afraid to ask for discounted "cull" lumber. Every yard has some and will be glad to see you coming. However, use only first-quality pressure-treated lumber for the floor joist and beam construction. It is important they be as sound as possible.

- Use *galvanized* deck nails and deck screws.
- Don't even think about trying to put up the support beams and flooring alone. You will need at least one helper who isn't afraid of working from a ladder or scaffold.
- Consider using cedar siding. It is an additional expense but it never needs painting, will age pleasantly without rotting, and will look less commercial than pine or fir. Reverse Board and Batten or T111 siding are standard 4-ft. by 8-ft. sheets and often come primed if you plan to paint. Some are designed to look like cedar shake shingles.
- Be mindful of building restrictions in your city, county or subdivision. These are considered outbuildings.
- Make sure the spindles on the railings are no more than 4 inches apart.
- Place the door near a corner of the house, position the hinges on the side next to the corner and open the door outwards if possible. This will give you more wall space, which will be at a premium inside the treehouse. Be aware of the position of the hatch door through the deck and its relationship to the door of the treehouse. All of this assumes your treehouse will have a "deck." If you do not have a deck and you build a ladder, the door must swing inside or you can put a trapdoor in the floor.
- If your treehouse is to have electrical service have a competent person do the wiring according to code and make sure it is GFI protected.

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of the Barnes Arboretum. He serves on the PHS Gold Medal Plant Award committee.



...I can remember
sitting in the hostas.
My mother was
not thrilled...

Green Grow the Memories

by Judy Mathe Foley

No living thing really belongs to us except in memory. But, oh, what a powerful force memory is. Remember gardens, and you engage all the senses: the sweet scent of gardenias, the color and taste of homemade elderberry jelly, a red climbing rose that smelled like cherry lifesavers, the feel of soft, spring grass on bare feet, the enveloping quiet of a heavy snow, the wonder of a newly pulled radish.

“Time takes all but memories,” says an old sundial. And memories take time and are worth the effort. Remember gardens past and you uncover nascent yearnings and powerful emotions. You discover them snugly hidden like baby rabbits in a nest of their mother’s silky fur in a meadow’s hollow, or like a clump of spring anemones hidden under damp brown leaves, just awaiting discovery.

Seek memories born of the earth, and you discover powers beyond human control. In calling upon Mnemosyne, the goddess of memory, you also arouse her daughters, the Muses, entertainers of the gods, guardians of inspiration. It was those powerful Greek myths that helped poet and author Phyllis A. Tickle understand her relationship with the plant world.

As a child “the world seemed to me to be an insurmountable garden in which I was at best only a visitor passing through. The trees and the plants were pieces of the earth that rose and sank with the seasons and with the courses of their own life cycles; but they were the earth while I was only on it. . . . I was never much of a flower lover, even in those days of childhood — at least not a grower and cutter of flowers. My joy was all in the open fields and hillsides where the flowers bloomed rampant and uncontrolled in the silly profusion of daisies and brown-eyed Susies.

“With the ignorance of a child I met the trees, plants, and flowers as creatures whose life purposes and cycles were superior to my own.” Tickle writes in her book, *Final Sanity*, (Upper Room, Nashville, Tennessee, 1987). “I knew the earth was going to win again by taking back to herself what my father and our neighbors had so painfully put there, the yards appeared to me as no more than exercises in human

ego. They appeared to grow from human need to impose human will, however briefly, on the earth.”

Tickle, whose writings about the seasons draw heavily on her life at Lucy Goosey Farms in Tennessee, came to understand the Greek myths and the reverence for nature’s processes from which they sprang: “I wandered in my ninth year through a world of gods and demigods whom my

“I knew the earth was going to win again by taking back to herself what my father and our neighbors had so painfully put there, the yards appeared to me as no more than exercises in human ego. They appeared to grow from human need to impose human will, however briefly, on the earth.”

Final Sanity, Phyllis Tickle

father pruned, but whom I knew he would never discipline or shape completely to his will. . . . It was a great joke I shared with the goldenrod and the pussy willow that they would live forever, and we would not.”

Remember gardens, and you travel to worlds not recently visited, but vividly recalled — worlds of both geography and of memory. Visit your childhood, then check your own garden habits and you might find your past reflected there. Garden memories call up people and places, mores and methods that have taken firm root in your heritage.

“You made me remember a lot of stuff,” said Matilde Salganicoff, a frequent Pennsylvania Horticultural Society City Gardens Contest judge. A question about garden memories transported the Center City Philadelphia psychologist back to her

childhood home in Buenos Aires, and her mother’s garden with its huge pots of “absolutely gorgeous gardenias with a perfume that was out of this world.

“I remember me being very, very little and kneeling on the ground in the autumn, my mother and I working together, removing freesia bulbs. I see the two of us as if I’m looking at a picture. It’s a very precious memory. She loved everything that had perfume. I’m still crazy about gardenias and freesias, you know, because they bring such sweet memories.

“I remember every spring there would come a guy with a big carriage drawn by two horses. It was all loaded with chairs — all kinds of wickerware — like a big bunch of grapes hanging over the side and over the horses’ backs. And the guy would yell, and then my mother would come out to buy the wicker. They were all handmade, beautiful furniture. I still remember the colors — beige with red designs — and there were beds, tables, armchairs, double chairs, rocking chairs.

“Oh, and another guy would come with soil and large ceramic pots. And when he came, it was for sure that spring was there.”

Comfy hostas and a purloined tulip bouquet

A youthful Stephanie Andrews can remember “making my mother absolutely furious when I was about 7 or 8. We had hostas lining the walk and they looked like wonderful hassocks, and I can remember sitting in them. My mother was not thrilled.”

Patsy McLaughlin’s father’s tulips also fell victim to childhood enthusiasms. She remembers two rows of giant, bright red tulips her engineer father planted down their driveway in Somerville, Mass. “One year the boy next door picked them all for



*The purple iris were in bloom,
coming up through the snow.*

a bouquet for his mother. My father was not pleased."

Natalie Kempner, former Philadelphian who now lives in Woolwich, Maine, used to pick violets and trilliums in the woods for Mother's Day and her mother's birthday, and she remembers looking, too, for ladyslippers, but she knew they were rare and was not to pick them.

Once Kempner and a couple of her friends decided to "surprise" her mother by helping with the gardening. "We dug out all the bulbs in a bed that was her pride and joy. When she came home, we proudly told her we took out all those old potatoes for her. It was not exactly what we should have been doing."

Kempner, a former teacher who was an Advisory Board member of the PHS's Philadelphia Green, and who chaired the Junior Flower Show in the 1980s, suddenly recalls, too, a flower show in the third grade in which she entered a simple green plant her mother had planted in a pot. "Lot of kids in school came from much better-off families than I did, yet I won three prizes. I think the judges' comments were about how well the plant matched the pot! I remember being so impressed with my mother's skill."

Iris in the snow

"The memory be green," a character in Hamlet says. Such are childhood memories. As a child in upstate New York, Natalie Kempner had a treehouse in an apple tree where she went to read "everything I could find. But Billy Stroud's treehouse in a maple tree was really the best one because it was a better tree and had better construction. And I remember Mr. Stroud's rose bushes. We would all go to stand in Mr. Stroud's roses to have our pictures taken for events like junior high graduation."

Stephanie Andrews remembers boys pretending to smoke "johnny smokers," long green pods that fell from city trees, and Liz Schumacher remembers using rhubarb leaves for hats.

Sometimes a memory is a moment. Because a huge snowstorm had closed down the whole city of Tokyo, Schumacher and her eight-year-old friends had the day off from school. They crawled over the wall of the Meiji Shrine, which was close to her home, "and wandered among the walls through this very quiet, gorgeous park. The purple iris were in bloom, coming up through the snow. I will never forget that."

Schumacher, who now owns Garden

illustration by Julie Baxendell



We dug out all the bulbs in a bed that was Mother's pride and joy, thinking we were harvesting potatoes.

Accents in West Conshohocken, also remembers "a huge, huge pine tree about three doors down from our house. We used to be able to find all kinds of four-leaf clovers under that pine tree. So we would sit there for hours looking for them. Isn't that great? Don't you wish you could do it now? Occasionally, still, some of those four-leaf clovers will fall out of a book or something, and remind me of that.

The surprise of that snow-covered iris and the pleasure of discovery brought by those long-ago four-leaf clovers may hint at the origin of a concept Schumacher uses in her garden lectures. She tells her audiences to include an element of surprise to create a memorable garden because "you remember the unexpected."

Surprises aplenty exist in the terraced garden she and her husband Ralph created on a steep bank behind their house in Gulph Mills: a four-season garden with interesting tree bark for the winter, many treasures from the Schumachers' travels, berry bushes, a fish pool, a fountain, and a woodsy area. "I get a kick out of the fact that people driving by our house have no idea there's a garden back there," Schumacher says. "We can't even see our biggest area of grass from the house because it's above the roof line."

In accenting your garden, she says, "you need to use things that mean something to you. What's memorable will vary from person to person, of course, because you relate

to things that have some connection with what's gone before."

The mighty pull of the past

What's gone before is not only the stuff of memory, but often the present feels its mighty pull. "Growing up, I lived with the woods right out my back door. It was magic to me just to be able to run off into the woods where I would catch turtles," says landscape designer John Collins, who creates city parks that have a deep woods feel.

Growing up in the middle of Andorra nurseries gave bonsai enthusiast Frederic Ballard the opportunity to observe the structure of trees. There he began looking at the forms and shapes and growing habits of individual trees. That, and the fact that his grandfather was an avid collector of black and white prints, taught him to "look at an individual thing and say something about it. To look at it in a way that you don't just glance at it, but pay attention to individual things."

Ballard says he's not a gardener, but he finds pleasure in caring for — and about — all the big trees on the property he shares with wife Ernesta in Chestnut Hill. A garden, he says, should not be "a matter of staggering displays of color and bloom," but rather a composition, an ambience of space, "surrounded, and to some degree, punctuated" by big trees, creating a sense of serenity.

Sometimes a gardening habit is so intentional that it's not difficult to trace it to its exact source. Matilde Salganicoff's grandmother, who emigrated from Russia to Argentina to escape the pogroms against the Jews, "was very poor and grew flowers in the front yard in tin cans, but the vegetables were always in back. To put vegetables in the front garden was not elegant. So it's my rebellion," says her granddaughter, "to have tomatoes in the front yard, but I can still hear her saying, 'You cannot have tomatoes in the front lawn.'"

Another of Salganicoff's gardening mentors is a school teacher she never met, a Miss Hitchner, into whose house and garden in East Oak Lane Salganicoff moved in 1969. "I counted. She had 42 rose bushes. She must have fertilized constantly, because any time you threw a piece of something, it grew!"

"There I really became a gardener and took my revenge. There, I also realized my dream of walking from the kitchen into a beautiful garden that contained all you wanted and a little bit more," Salganicoff recalls. "I still mourn this garden 17 years

Your garden, yourself

If Miss Hitchner was Salganicoff's patron saint, the romance of 'Rainbow Skies' initially attracted Patricia McLaughlin. Her voice takes on a dreamy tone when she remembers the 'Flying Saucer' morning glories and a daylily named 'Rainbow Skies' she planted in her first "little margin for gardening" at a downtown Philadelphia apartment. "It was very pale, some cream, a little pink . . . but you know, a funny thing is I remember the names almost better than I remember what the flowers looked like. They had wonderful names like 'Intensified Tide', 'Rainbow Skies', and one I didn't order because it was very expensive, called 'Siberian Sleigh'.

The garden "worked pretty well, even though the daylilies mostly didn't have enough sun. And oh, then somebody broke into my apartment by putting a porch chair right up to the window. And they put it right on top of the daylilies, which were in bloom, can you believe?"

In her next, and now 12-year-old, effort in the city's Spring Garden area, she moved on to climbing things, including a Kordes rose of vivid memory called 'Hamburger Phoenix', a red climber that "covered the back fence with dozens, if not hundreds, of bright red flowers. And maybe it's my imagination, but they smelled just like cherry life savers."

Being hooked by the romance of flower names is not unusual for a writer — McLaughlin is style columnist for the *Inquirer Sunday Magazine* - but even she seems surprised by the depth of her sometimes frustrating plant relationships. When her own garden was filled, she moved on to volunteer stewardship of the plantings at Eastern State Penitentiary and this year for Easter's sorrel soup she harvested fresh sorrel from her new vegetable plot at the near-by community Spring Garden.

McLaughlin says she's given this obsession a lot of thought. "To some extent, it's a substitute for children, and to some extent, it's a substitute for being as beautiful as you are when you're young. When you're 18 years old, you're as pretty as a daylily like 'Rainbow Skies'.

"And it seems like such a bargain. It's such a deal that you can buy a twiggy little

thing with a lot of crunched-up dead-looking roots, and then you plant it and then . . . well, just sort of armsful of glory. It's astonishing!"

McLaughlin says she used to garden only for the result. "I realized I had turned it into just one more job. But lately I've come to enjoy the work, and I've learned not to worry about whether I get it done or not . . . and it's just as good as yoga!"

Gardens reflect the personality of the

"I realized, it's not about what you want to grow. It's about what wants to grow there. I mean, that's what counts! It puts you in touch with nature and with life, and the world that really doesn't care about you. It makes it so clear that you're not the center of the universe and that what you want is basically irrelevant."

Patricia McLaughlin

gardener, but inevitably the garden instills its own discipline on its creator. "I used to spend all this time going through catalogs and deciding what I wanted to grow. I would figure out that I wanted this to grow here and that to grow there. I mean it was so frustrating. My first catalog order was horribly expensive, and by the next year practically nothing was left. And those catalogs are so sneaky. They say this will tolerate from half sun to half shade kinds of things and this blooms all year, etc., etc. and it's never true. And I just got horribly frustrated.

"Each year I would try again. Then I realized, it's not about what you want to grow. It's about what wants to grow there. I mean, that's what counts! It puts you in touch with nature and with life, and the world that really doesn't care about you. It makes it so clear that you're not the center of the universe and that what you want is basically irrelevant. And once you learn to go along with that, somehow it's very comforting — and relaxing.

"The universe doesn't care what you want to grow there. You can't rush it. It's like being a baseball fan. There's always next year."

Nothing belongs to us except in memory

In 1988 the poet Sonia Ralston faced the painful prospect of no "next years." She was leaving "Keepsake," her stone farmhouse beside the Brandywine, and with it



... when we got home from school each day, we had to pick one hundred buckets of rocks...

three sons. "There was no such thing as mulching. We had to get out there and hoe and weed.

"The soil was fertile, but loaded with rocks. There was a rule that when we got home from school, we had to pick 100 buckets of rocks and dump them at the edge of the field before we could do anything else, homework or anything. As a result, to this day, all around the property there are huge rock fences.

"We raised goats, too, and we used the goat manure on the fields, but we also put it in buckets of water and swished it around to make manure tea that we used on other crops," says Shoup, former travel editor of the *Philadelphia Inquirer* and now a freelance writer.

"We sold the goat's milk and strawberries. Along with working the other farms, that's how we made money to buy school clothes in the fall. We did a lot of real slave labor at our place and at other local farms, and at the end of the day if we got home before dark, we went to the local creek with a bar of soap to wash."

Yet, despite the hard work, "wherever I had space to garden, I've done it." Shoup and his wife MJ Crowley, former *Inquirer* librarian, now own 16 acres on a hilltop only 40 miles away from that family farm. They have vegetables, fruit trees — sweet and sour cherries, a plum, a pear and three apples — berry bushes, strawberries and four varieties of eating grapes. Gardening,

says Shoup, "is such a part of my life. It puts me back in my childhood."

Weatherman and City Gardens Contest chair Herb Clarke has farm roots, too. He says he's probably the only member of the Pennsylvania Horticultural Society who came out of Eden — Eden, North Carolina, that is, where he grew up on what he calls a mini-farm. "It was fun growing up there, fun to work in the soil — and it still is."

Gardening is a way to keep alive cultural traditions, to remind us we're all originally from the earth. The City Gardens Contest proves, Clarke says, that plants are important to people's heritage. "People bring their plants with them. They bring them from Japan, Cambodia, Vietnam, the Philippines. They bring them from the South — cotton, black-eyed peas, peanuts. And through the plants, they keep their traditions."

Clarke says a longtime friend in North Carolina once told him, "Don't forget your raisin's," meaning "hold on to your roots." Plants, landscaping, and growing things, remind us of those roots, he says. "In the early spring, I like to walk barefoot in the grass. It's a totally different feeling, and it stirs up and brings back a whole lot of kid time."

A radish adventure

City gardens can yield as much pleasure per inch as a farm does per acre. As executive director of Friends of Philadelphia

Parks, Stephanie Andrews is an advocate for acres of woodlands in one of the nation's largest city parks, but her prized memory is of very small radishes she grew as a child.

"There was a big open field across the street from the house where I grew up on Allen's Lane where a number of neighbors had victory gardens. It was near the end of the war, probably in 1944, and I planted radishes. I guess I was given radishes

"The soil was fertile, but loaded with rocks. There was a rule that when we got home from school, we had to pick 100 buckets of rocks and dump them at the edge of the field before we could do anything else, homework or anything."

Mike Shoup

because they're foolproof — the easiest, most exciting, successful little venture you can have when you're six years old.

"I can remember how the day smelled, that summer dry air and the smell of the earth — and being so excited. They tasted great. This was my harvest!"

The thrill of that victory garden radish stayed with Andrews through several gardens, one of them a multi-family garden in Mt. Airy where she and her husband Chuck shared an 11-bedroom house and the gardening chores with Stephanie's sister and brother, their parents, brother-in-law, and five children. At the "big house," the Andrews made pickles and elderberry jelly, canned tomatoes, and they dried herbs for a spice shop Stephanie ran with her sister Bronwyn.

Successive gardens included one that won first prize in the City Gardens Contest, and a "tiny little shade perennial garden on Catherine Street that we could weed sitting down and not have to move." To create this one, all the blacktop had to be removed from the backyard and then because there was no direct garden access, everything came in the front door and went out through the back. "We moved tons of topsoil in wheelbarrows that way. The urge to garden was much stronger than any compulsion to keep the house clean."

Like Patsy McLaughlin, Andrews learned to give in to the strongest compulsion and let the rest go. Gardening, she says, "comes to you when you're older and ready to do things that are quieter and require more patience. It's the only thing in

the world that has every taught me any patience. Gardening taught me to be able to deal with not having to have an instant response."

The goddess of memory is fickle; catch her while you can

Stewards of green, living things go to great lengths to preserve both the plants and the people whose memories they recall.

Stephanie and Chuck Andrews have now moved into an apartment where they have only houseplants, but soon they will be spending six months of the year at a new home in The Thousand Islands in Cape Vincent, New York. There they are creating a new garden that will include lilies, hostas and Chuck's grandfather's ferns and his grandmother's irises they've taken there from their old gardens.

"I've spent a lot of time schlepping plants places, I realize," Stephanie says. "But if you have something you really like and you treat it carefully, it will almost always survive. Plants have histories and they remind you of things and of people."

Capture garden memories not simply for enjoyment, but for posterity, says Charles Cresson, a fourth generation member of a horticultural family. He should know. He and his father share stewardship of a two-acre garden in Swarthmore that was begun in 1883 by Ezra T. Cresson, curator of entomology at the Academy of Natural Sciences.

With few written records to guide him, Cresson, an author and horticulturist, is compiling a book on the history of the family garden. He's found family stories and memories to be among his most valuable tools. "Memory is a fragile thing that comes in fits and starts. Over the last 20 years many of these memories have been lost and are now forgotten, so get it when you hear it because you'll never get it again."

The garden contains many old climbing roses that were in vogue in the early 20th century. "My father remembered the names of almost every climbing rose here, and when I went back and documented them, they were definitely the same and all dated 1910 and 1925, all that period. So our old roses are contemporary to the garden."

Among them are 'Silver Moon', a semi-double with big floppy white petals, that is disease resistant and vigorous, and one of Charles Cresson's favorites; 'Mary Wallace', a pink one; 'American Pillar'; and a pink 'Tausendchon', whose German name means a "thousand beauties."

For the Chester County author and poet Sonia Ralston whose three sons were all married in that garden, leaving "was rather like finding your house on fire and trying to decide what to take, what you cannot bear to leave behind."

Sometimes a memory gives a clue, and then follow-up research finishes it off, Cresson says. "For example, our mountain laurels here are quite large and are an important part of the garden. They came from the Springton Reservoir outside Media. When they started to fill the dam, my father got permission to dig them up before they were flooded. That dam was built in about 1930, so that's how we dated the mountain laurels.

"There is quite a lot of scholarship you can do in an old garden," says Cresson who traces plant varieties back through the literature to their country of origin. "Every year, it seems, I manage to identify one more plant. There aren't many things I can't precisely identify any more, but there are still a few. It seems like every year, another one comes down to the final details."

In Sonia Ralston's garden at Keepsake, trees — sycamores, oak, maple, fir, hemlock, chestnut — were especially important. When her son David was in 4-H he received a handful of seeds that eventually produced a forest of blue spruce trees, some of them donated to Pennsylvania Township in 1976 for the bicentennial.

An oak Ralston started for a grandson was subsequently dug up and shipped to Idaho where it is now a 15-ft. giant. "Now in my 70s when I should have acquired more sense, I continue to plant just a few more trees each year. Lunacy, I'll admit . . . [but] from our final sickbed [the gardeners among us] will probably be worrying more about whether someone will go on watering those vulnerable young sycamores than who will inherit the family silver."

Operating in the doubting space

It is not by accident that the history of Christianity begins in a garden, for few places — whether wild or vigilantly tended — offer as many clues to the ways the universe works. Few other pursuits offer such miraculous results or require as much faith. "One learns to trust the frail sapling which will, with loving care, one day crowd out

the doubting space set aside for it," says Sonia Ralston, who now writes a "Dear Friends" column for the *Kennett Paper*, which often contains gardening stories and their lessons.

"It's almost impossible to watch the winter-frozen soil come alive each spring without a profound sense of awe. And with it, the inescapable recognition of our dependence upon the Earth and each other."

Herb Clarke quotes author Henry Miller as saying gardeners are closer to God than anyone else. "I believe that. I mean to put a grungy little dried up seed in the ground and expect to get flowers — that takes faith! It takes faith in October to put a tulip bulb in the ground and think this thing is going to survive a long, hard winter, and in April it's going to burst forth in a blossom. You're kinda close to God to think it's gonna break loose. And it does!"

In her book, *Final Sanity*, Tickle tells of hyacinths that her husband's great-great-grandmother "fetched from Virginia to the Appalachian foothills. Since then each Gammon child has fetched them again as he or she left the homeplace to push further on.

"Each March and April they bloom up shorter and more timid of color . . . but it is not for their floweriness that we have them. . . . Great-great-grandmother's hyacinths bloom in dozens of yards each spring, making a chain of connection across the southern United States and more than 150 years."

"What blooms every spring, also, is an understanding of what mattered in 1825. In a hard land with its scarcity of domesticated flowers, Great-great-grandmother must have seen in the hyacinths a portable symbol of her eventual victory over a wilderness and enough promise of future generations, so she built and passed on emphatically the ritual of the hyacinth."

Judy Mathe Foley, never having learned the patience gardening requires, prefers the wild abandon of the woodlands where she grew up under the tutelage of a father for whom those woods were a spiritual adventure. Mac Mathe, who died in February, used hunting and fishing as an excuse to explore in all seasons the Endless Mountains of Pennsylvania. In Judy's city garden, she has just planted three Whiskey Mac roses in memory of that father's complete agreement with the wise person who said, "Some men go fishing all their lives without ever realizing fish is not what they're after."



An Unlikely Garden

A honeysuckle and multiflora path becomes an unlikely but treasured private retreat in which to think and unknot knotty problems.

Ignoring the brilliance of peak-season borders, visitors steer their guests toward the featureless scrub beyond my flower garden. Their destination is the secluded path that threads the perimeter of my four acres of overgrown farmland.

Visitors who like the path, really like it. Some who have recently been introduced by other gardeners return with friends. Experiencing the path can stay with you. When I meet former visitors, they often ask

for news of it. Some describe the sense of sanctuary and the feelings of mystery and surprise the path engendered. The response both surprises and gratifies me.

Visitors called my hidden trail "the path garden," although I always thought of it as just the path. It had been hacked and mowed through an underbrush of multiflora rose and honeysuckle vines that half smothered a thicket of native saplings. The path's mundane purpose was to provide a

safe place to walk an unleashed dog. I never intended it to be a garden. There were gardens enough to maintain. Although to some degree my resolve eroded, for me the path remains foremost a wild place, an intimate place of dreams.

From the beginning I walked the path often. At least twice a day I'd saunter along whistling softly, as Rhodie, whistling in her way, sniffed out rabbits on their rounds. In late May that narrow trail was all petals,



Natural sapling arch for private garden path: the predominant forest-edge plants, such as sassafras and sumac, that surround the arch make it the most colorful autumn area along the path.

engaged by the path for five years. There was a lot more to it than I'd expected. Aside from a nice stroll, it was a place where ideas opened out and new thoughts easily took wing. I walked here to think through knotty art or writing projects, as well as mull over life and gardening decisions. Open gardenscape around the place never so catalyzed my thinking as did this private domain.

I didn't spend my thinking time unoccupied. Besides pruning for access, there was much to do. Only daily attention kept the route free of leaves and debris. Leaf fall exposed a season's worth of fallen branches and twigs wedged deep in thorny growth. How could small trees afford such a deficit of limbs?

Checking honeysuckle's encroachment was another continuous chore. For all its invasiveness, I found the vine to have a tentative earth hold. After all, it need not defy the wind's grey fists. The root-rich sapling in its grip will resist the tempest for it. I discovered that a complexity of honeysuckle springs from a single, brittle rooted cord. One educated yank defeats several season's growth.

My best ideas come as I work. I carry a pad and pen in a back pocket. Sometimes I carry my watercolor paraphernalia to the path and take possession of time and space in another medium.

The more familiar I became with the path, the more its wayward vigor tempted me to venture beyond maintenance. My urge increased as evermore seductive possibilities metamorphosed amidst the rampant growth. One day, the notion of rose swags and cascades put me literally over the top. The idea was that a mass of bouyant canes locked in haphazard competition could be made to display their natural grace. Convincing 17-ft.-high thorny tangles to part and arrange themselves through and over twiggy branches 12 ft. in the air was arduous work. I was rewarded in late May with falls and arches of fragrant, shining white, made more brilliant by the dark passages below. I had another idea. By judicious pruning, I would darken and shape the natural bays along the trail. These deeper depressions dramatized neighboring areas of dappled light. Then I took to dramatizing shadow. Pruning for density along a narrow passageway within the rose hedge gave the area a sensuous, gloomy distinc-

tion. It also increased the mystery by enriching the shadows pooling there. All the while, I tried to keep my interventions unnoticed in the natural picture.

The shifting light and shadow became a study in itself. One morning, I enlarged a side gap in a leafy corridor where branches joined overhead. Now, at midmorning, it

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became a sunlit aperture holding a fretwork of glowing grapevines, like a picture on a dark wall. And so it happened that, here and there, these projects brought some understandable form to green chaos. I kept at it to see where my small experiments would lead, and the results pleased me out of all proportion.

My flower garden suffered as I came more frequently to the path and lingered there against my best intentions. It seemed that I couldn't make a round without being stopped by some compelling idea. Sometimes the involvement was a practical one, but often my schemes seemed to more closely resemble studies in composition than an interaction with living plants. At other times, the philosophical nature of my mental rambles intrigued me as much as the path's artful possibilities. This play between action and contemplation inevitably held my interest — and held me up.

Some of my friends saw to the heart of the dilemma. They began joking about the wilderness claiming me. A gardener's obsessiveness is, of course, a common source of not unkindly humor. My husband teased about my pursuit of the phantom garden at play among the path's haphazard luxuriance. I appreciated his "play" on gothic romance. But the idea didn't seem that bizarre to me. Like a bluejeaned Mona Lisa, I smiled indulgently and kept my own counsel. For out among the shifting green tableaux I'd developed my private explana-

Retreat



by Barbara Bruno

fragrance, and fast arching canes. I carried pruning shears in my back pocket. I needed them daily to curb the drifting thorniness. Otherwise, I let nature play out its green improvisations. Beginning with poverty grass and blackberry briars' gold and scarlet autumns, through meadow to shrubland to woods, I liked observing my land's backward evolution toward the coastal holly-oak forest of its prehistory.

By the time visitors appeared, I'd been



Arbor construction: choosing the right wood cuts maintenance period. The most durable woods found along the private garden path are cedar and mulberry. The latter has attractively curved branches. Maple wood needs yearly replacement.

30

tion. It was more outrageous than any of my teaser's theories; on the other hand, it embodied some grain of truth. Surrounded by the drifting greenery, I dreamily wondered: *Was this urge to put to rights my Eden's sweet disorder some intrinsic expression of a primordial gardening instinct?*

A garden of honeysuckle and multiflora rose?

The reader might reasonably wonder. But isn't it an amusing idea, to turn tables on these scourges of the cultivated acre and bend them to a gardener's will? They fit at least the environmentalist's ideal: no watering, no fertilizing, and little weeding. At present, they are the weeds. Yet it wasn't until mid-century that they became so devalued. With odd human logic, unstinting robustness begets horticultural eclipse.

Lonicera japonica 'Halliana' arrived

innocently enough in 1862 as a fragrant garden treasure. This honeysuckle's variety name honors a Harvard-trained physician whose wanderlust took him in 1846 to practice medicine in Shanghai. Or was it a keen plantsman's addiction that drew him? Dr. George R. Hall exhibited classic symptoms. He ventured frequently through the moon-gates of local mandarins, judging from the stream of distinctive Chinese garden plants he forwarded statesward for introduction to western gardens. In one serene setting, maybe twining among his other discoveries - the star magnolia, *Magnolia stellata*; *Taxus cuspidata*, the Japanese yew; various *Retinospora* spp. and *Thuja*; *Wisteria floribunda*, the Japanese wisteria; as well as the Parkman crab apple, *Malus halliana*, fittingly "pink pearl of the Orient" — grew a nonesuch honeysuckle. Its vellum-textured blooms' habit of aging from white to yellow suggested

'Silver and Gold' to ancient Chinese admirers.

On arrival, surpassing fragrance gave Hall's honeysuckle preeminence among other novel discoveries. Every gardener had to have it. Eventually every gardener did. It was still admired more than 50 years later in 1915 when garden authority J.

A gardener's obsessiveness is, of course, a common source of not unkindly humor. My husband teased about my pursuit of the phantom garden at play among the path's haphazard luxuriance.

Horace McFarland chose a prophetic photo for his book *My Growing Garden*. It showed a flourishing specimen smothering a stump at the entrance of his renowned garden, Breeze Hill. He passes on the hearsay that the vine had "evidently escaped" from gardens "in some areas." In 1916 that chronicler of gardening's finer nuances, Louise Beebe Wilder, mentioned it in her first book, *My Garden*. Among the rare, the beautiful, she approves Hall's Variety 'Halliana' as a "good, almost ever-green climber." It remained a stalwart of fragrant plant lists until mid-century. As late as 1967 that premier mail order house, Wayside Gardens, considered it worthy of their list. Sometime after that the acclaim ceased.

In the small town where I grew up, honeysuckle covered every alley fence. Maybe it was encouraged there to combat the summer aroma of garbage cans just outside the gates. In the neighborhood where my grandparents lived, honeysuckle grappled with grape vine on discrete arbors that lead to recently obsolete outhouses. Its thatch of vines was a sure place to collect resting lightning bugs on a summer afternoon.

I encountered *Rosa multiflora* at the dawn of my first gardening fervor, when a glossy catalog made an offer. For a small amount of money they would send me a large amount of "guaranteed living fence." I set out the tiny whips to perfection. They greened quickly in bleak fields, and not one died. As they gained a thorny stride, I recognized in them the mysterious and enormous bush bequeathed me by a former landowner. I had thought the bush distinguished, imagining it some rarity. I enjoyed then, as now, its rich fragrance so free on late May air.

Long before the vogue of the living fence seeded our landscapes, multiflora was

After 2,000 walks

**Trees and Shrubs Hardy in the British Isles*, William Jackson Bean, (First edition, E.P. Dutton, N.Y., 1915); several editions available for loan to members in PHS's McLean Library.

design probably inspired my initial, philosophical turn of mind. My early visits there were a quiet time for thought about what was important and what is a garden's nature and what is worth striving for. Even later, after I began experimenting with scattered refinements, most of the time I did little more than discipline wayward growth. Yet, all the while I was watching and waiting.

Sometimes a gardener need do nothing but wait. Yet, it isn't always easy to recognize a proffered opportunity. In this case

There were surprises that I capitalized on, like a natural gothic arch of snow-bent trees draped in honeysuckle. Passing beneath it, the path entered a fabricated vine-walled room. I planned a flower-tapestried spring rug there - once I could find a rabbit-proof combination of plants.

nature was bold, beautiful, and not to be ignored. Before its dramatic flourish, things had been going on just as happily as ever. They could have continued that way —except for the appearance of the moss path. Moss had found an environmental niche on ground cleared of leaves and hardened by a thousand footfalls. Its random clumps increasingly made pleasing accessories along the way. Then, as the fourth winter warmed toward spring the path suddenly flowed a solid, living green-gold among winter browns.

This prespring show still surprises me. The moss expeditiously awakes before foliage cuts off the sun's flirtation with the forest floor. The path's intemperate brilliance lasts through rose time then settles into a matronly mid-green or dry olive, as rainfall dictates. Summer's carpet is pleasantly woodsy; green incandescence unrolled across winter's withered monotone astonished me.

Although "garden" still wasn't a comfortable fit with my hazy aspirations, from then on I worked more actively to dramatize the path's natural features. It seemed that the shady green panorama would benefit from a few sunny areas. I thinned the leafy canopy to highlight certain spots. Constricted passageways became dark tunnels opening onto these new sunlit clearings. I encouraged the natural predominance of cedars or hollies in some areas to give textural variety to the journey. In spite of its pervasive greenness, traveling the

path eventually became quite a visual adventure. There were surprises that I capitalized on, like a natural gothic arch of snow-bent trees draped in honeysuckle. Passing beneath it, the path entered a fabricated vine-walled room. I planned a flower-tapestried spring rug there — once I could find a rabbit-proof combination of plants. Grape hyacinths seemed worth a try. And why not — dandelions! If this weed were less willing, it would be as exalted as a choice primrose. I warmed to the thought of these not so rare coins among the hyacinths' blue sprigs. This whimsical addition to my cast of the horticulturally disenfranchised was flummoxed by low light levels and woodland marauders.

There were always ongoing construction projects to detain me. I fashioned sapling arbors, arches, and passageways that were lots of work to build and maintain but, to my satisfaction, were often mistaken for natural, woodland props "just there." It was my utmost pleasure to see just what could be done with the given green ingredients.

Although I eventually went on to add compatible shade-loving, dryland wildflowers here and there along the path, I still think of my efforts mostly as a subtle kind of horticultural sculpture. At first, and most important, it was "gardening" by subtraction. Pruning turned out to be a multifaceted tool for enhancing both light and shadow. The unusual goals I pursued and the methods I devised to meet them were remarkably different from the ones I followed in my traditional plantings. This experience influenced my perceptions of all gardening. I now especially value the dramatic use of shadow as an essential garden tool.

My path has been given back to its natural progression for now, while I meet other obligations. All is not lost. I've been caretaker of this land for 35 years. Yet, half a human lifetime is only a woodland's scrubby adolescence. My Eden is hatching new possibilities as I write this. Its trials and errors are still being played out in gawky, green leaps. When I'm ready I'm sure it will surprise me again with fresh challenges.

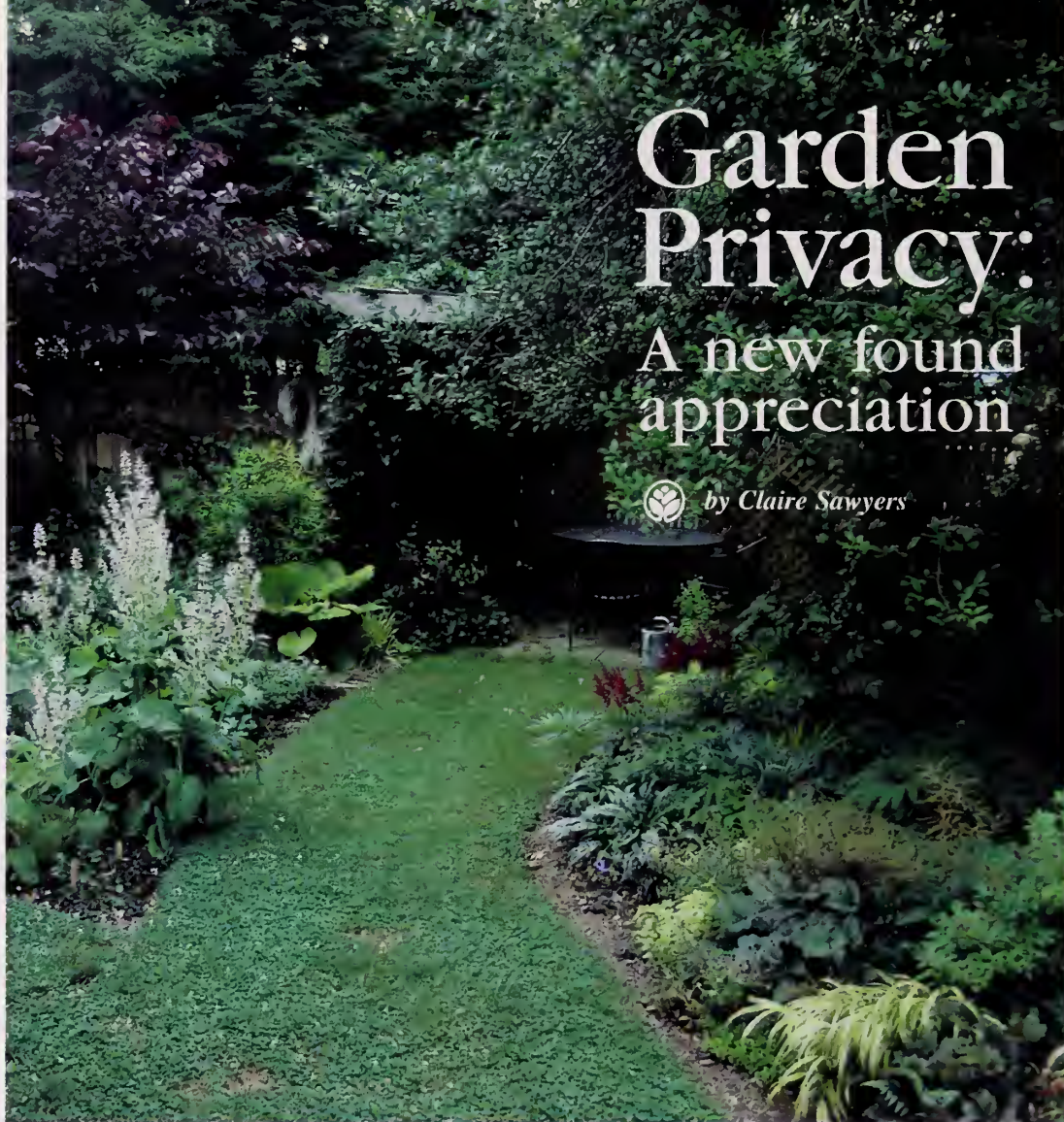
Barbara Bruno does not advocate planting pestiferous plants, such as multiflora roses. She does endorse the sensible conservation of a garden's native and established flora. She thinks that using what you have is a great developer of creativity and believes it can often lead to distinction in gardening, as in life.

Garden Privacy:

A new found appreciation



by Claire Sawyers



New lathe and new fencing across the back restores the author's privacy after new neighbors cut away protective bordering shrubbery.

When a neighbor with a chainsaw and a dogpen alters the landscape the author must find creative ways to restore privacy in her garden.

My true appreciation of privacy in the garden came to me, you could say, in a flood. I had been away for a long weekend and after getting home late on a Sunday night, I thought I'd better check on the container-grown plants and water them before falling into bed. When I opened the gate in the fence that shields my back garden from the side street, something seemed different. It wasn't just that feeling of having been away for a few days and coming home with fresh eyes. It was more than that.

Despite the late hour, light was flooding into the garden. I could see my neighbor's house in its entirety, their front porch illuminated by the porch light. I could see down the side street, with its street lights shining on the telephone poles, turning the black wires into threads of white. Light reflected off densely parked cars and there was enough light left over to flood into my garden. My travel weariness evaporated in the disorienting light and was replaced with a sense of shock. Before that night, I could lie out in my hammock knowing I was lost in the shadows and look up, taking in the stars as much as any

man-made light.

Over the three-day weekend while I had been away, new neighbors moved in behind me and dramatically changed the landscape. The dense twiggy thicket of lilacs and evergreen azaleas that teemed with birds (because the previous owners, an old couple, religiously supplied multiple bird feeders), had been reduced to a ragged stubble of gnawed stems. The urban hedgerow that once provided a pleasing play of pink and lavender flowers during the spring and a leafy green curtain to my garden for most of the year, was gone.

Of course the young owners hadn't done anything wrong; I just felt they had committed a heinous crime. My garden and its sense of privacy had been destroyed, so it seemed. Never mind gun control; I was ready to start a campaign for chain-saw control.

I met my new neighbors shortly thereafter — how could I not with nothing left between us and with their front porch now suddenly a part of my back garden? He started off with an apology, making me hopeful we could find some shared values. He said the plantings had been so full and dense he hadn't

even realized my patio-sitting area was there before he had cleared the growth. His acts had given me a platform where I could wave to all my neighbors while sipping my morning coffee. No more casual forays into my backyard in slippers and robe.

In our short conversation, I learned they had cleared the property to prepare for the installation of a dog pen. He assured me it wasn't going to be just a regular chain-link

Never mind gun control; I was ready to start a campaign for chain-saw control.

fence, it was the decorative grade, the wire coated with plastic. Naturally, what flashed into my mind's eye after hearing this was an image of a chain-link fence with bright plastic strips slipped between the wire mesh spelling out "Welcome to the Jones" or, crudely outlining some cute conifer scene like a kid's drawing. I was too disheartened to ask for further details, and even though I'm a dog lover, learning boxers were moving in did nothing to lift my spirits.

Instead of stealing whiffs and bouquets of lilacs from stems spilling into my garden from my neighbor's property, I imagined steamy hot August days when smells, similar to those from a livestock yard, would waft through my garden. And while enjoying a romantic dinner, I imagined my guest trying to be polite while watching the dogs lifting their legs to water some cherished plant through the chain-link fence.

I'll be the first to admit that in the big scheme of life, this little episode was nothing to complain about; I should have shrugged it off. But I had lost something; something that gave me daily pleasure; something I took delight in and refuge in — a private little corner of a garden that was mine. After all, isn't it the enjoyment of the small pleasures in life that make it rich and sensually rewarding? So isn't it necessary to mourn such losses?

I had some childish sense of security B.C. (before the cutting), a notion that because I was so appreciative of the borrowed scenery, the strength of my feelings would protect it. Eventually, we all learn that special things in life come and go among us, regardless of how much we appreciate or cherish them, but I wanted to



Top: Where once a wall of mature azaleas, lilacs and other flowering shrubs provided a floriferous and fragrant wall to the author's garden, there was suddenly a view to her neighbor's front porch. Claire Sawyer's immediate solution was to add new lathe to the back of her sitting patio (on the right: lathe stacked before installation). **Bottom:** Some sense of privacy was regained with the lathe up. The author consoled herself by admiring the new shadows it cast in the garden.



From the kitchen you can both look into the back garden and enter it. A collection of watering cans and *Parthenocissus henryana* tie the steps to the garden.



A new fence post provided a chance to hang a piece of found rope from a beach in St. Croix. The neighbor's hemlocks, though limbed up, still provide a backdrop or frame to the author's garden.

bargain with the gods. I'd already learned that life lesson; I didn't need to be taught that again, thanks anyway. I wanted my garden privacy back. And even though I had lived in my bungalow for several years when this happened, a bout of buyer's remorse set in. I'd made a big mistake trying to live in town where the houses of my two immediate neighbors are less than 70 feet from my hearth, the very heart of the house. I fantasized about owning acres where I would have more control over my views and my borders and a greater sense of privacy. To make matters seem worse, that very week I was asked to open my garden for a future tour. Rather than provide an answer, all I could do was tell of my sense of loss.

Actually, it may have been the request that moved me from a feeling of resignation into action. It was easy enough to enclose the patio-pergola on the back by using the same inexpensive, pre-made lath already clothing its sides. After work that first week A.C. (after the cutting), I headed to Hechingers determined to fit what I needed for the remedy into my Trooper. I knew the ivy masking the existing lath would grow quickly and soften the starkness and brightness of the new lath. I wove long ivy streamers from the sides through

the new lath to speed the process. When this job was done, it seemed so much better, I even took photographs having found a new delight in the early morning shadows. The sunlight streamed through the lath and

A bout of buyer's remorse set in.

cast a geometric pattern on the lawn. I could again have intimate conversations in my little outdoor sitting area without feeling as if I was in a fishbowl.

Then the chain-link fence appeared. The hemlocks my neighbor had spared in the first cutting were now limbed-up above my head with nubs up and down their trunks left by the chain-saw pruning. While my worst fears were not realized — the plastic on the fence was just a black coating on the wire — I still suffered a serious setback. There was nothing to make it blend into my garden. Another trip to Hechingers, another day of determined effort, more fresh lumber: I put my own fence up across the back, cheek-to-cheek with their chain-link fence. I matched the style of pre-made fence already along the street side of my garden trying to convince myself that that would make it seem as though it had always been there.

The garden immediately felt smaller, boxed in with such obvious borders, but having done this, I could once again usher visitors into my back garden with a sense I was revealing a private space to them, sharing something personal and secret. I accepted the invitation to have my little garden on tour for the following spring.

The new section of fence has been up for about a year and a half now. It needs to fade more to look settled (why hasn't somebody figured out there's a market for pre-faded fence just as there is for pre-faded blue jeans?), but I'm back to enjoying morning strolls before work, coffee in hand, taking stock of what's come into bloom, what's been nibbled on, and which birds are visiting the waterlily container for a sip. All the while I'm aware of the sweet, sweet privacy of my own little garden and, from time to time, fragments of a Robert Frost poem well up from the recesses of my mind, when my eye stops at the back of my garden on my fence.

Claire Sawyers lost and regained her sense of privacy in her garden on a corner lot only 60 by 100 feet where she has lived in a 1915 bungalow, in the heart of Media, Pennsylvania, since 1994.



Romantic Places in Public Gardens



by Olivia Lehman



During a day spent at Morris Arboretum in late April of this early blooming year, I watched my four-year-old daughter and her playmate and occasional foe walk down a grass path lined with stunning wisteria. At the end of their stroll through the swaying walls of purple, the two held hands and jumped down wide stone steps, which were flanked on each side by a few of the season's tiny wildflowers. Was there ever a romance disconnected from a scent, a field that wants a blanket, a rain of petals? Even enemies can become friends for a moment in a garden; and true lovers, well, they can go to town.

What is it about gardens that brings people close and calms them somehow? Turning to a companion one says, without words, "is this real?"; piercing beauty asks to be shared. In combining a single blossom's simplicity with the enormity of true light and wide sky, a garden provides an array of experiences, as does love. With a close companion we not only share casual moments, but are also drawn to address the unanswerables. Perched on a sacred seat with a friend at our side, we feel both the desire to face nature's sometimes melancholy grandness and to enjoy its comforting, sensuous, details.

Someone familiar with the details to be found in the area's public gardens is

Lori Salamida and son Wynn Geary share an intimate moment at the Morris Arboretum of the University of Pennsylvania (in Chestnut Hill).

photo by Addison Geary

Renee Swan and Keith Atkinson enjoy a quiet stroll at Morris Arboretum near the child-sized cabin and stream.

Barbara Klaczynska, project manager for the Gardens Collaborative. The Collaborative is an organization comprised of 30 outstanding gardens, arboreta, and historic buildings in the Delaware Valley that was conceived in the late 1980s by Tim Tomlinson, then associate director of Morris Arboretum. His aim was to promote the area's gardens more widely, looking to attract visitors from afar. Klaczynska, who has been fundraising and marketing for the Collaborative since 1989, knows the gardens well and assures us that the words "public garden" and "intimate," can be uttered in the same breath — my own visits to a few of the sites confirm this.

Morris Arboretum

Morris Arboretum is located in Chestnut Hill, an old, green community just 30 minutes northwest of Center City Philadelphia. At the turn of this century, a wealthy Quaker brother-sister team, Lydia and John Morris, molded their 176 Chestnut Hill acres into what is now Pennsylvania's official Arboretum. The rolling landscape here is exquisitely maintained and subtly enlivened by a great variety of horticultural timbres.

Just yards from the Arboretum's Visitors' Center stands the black Japanese bell whose gonging marked my walk's beginning. As one treads Morris's clear-cut yet delicate paths, there is always a floral surprise lurking, whether underfoot, or at another level or distance. In the many forest-like spots, which adjoin paths, dense fern plantings often appear, and in their midst an always appropriate flower like virginia bluebells.

The Rose and Herb garden is one of Morris's star attractions, and the first rest stop of my tour. Divided into four square sections lined with boxwoods, each unit is joined at center by a dulcet fountain and enclosed by a lovely rock wall spilling over with euphorbia, spurge and miniature sedum. It is here, overlooking the rose garden, that one of Morris's most romantic spots lies. Never has rock seemed so seductive as it does beneath the shade of the massive saucer magnolia tree rooted at one high corner of the site. Atop this hillock, an artist has fashioned boulders into what one friend has aptly called a "perch." This bench sculpted yet raw, is as sensuously



alluring as a bench in an elegant public park could possibly be. Add to this spot's elemental appeal the presence of a small blue-tiled pool and an arching staircase and you might have in one place an afternoon's sole destination.

My own party, however, did pull away from the rose garden overlook. We traveled through wisteria, down hills, past a child-sized cabin surrounded by ferns and a stream and on, towards a clear field, whose centerpiece was a sculpture inspired by the Indian yogi Iyengar. With water pouring forth from a set of stone steps below the dancing metal piece, this wide open garden might be a perfect spot to laze on grass together, contemplate, listen. Other romantic stopping points at Morris include: a steamy, glass-ceilinged fernery, resplendent with maidenheads and craggy pools of carp, the pond with its fleet of swans, and a stone-encrusted grotto whose entranceway is marked by a ravine garden overflowing with bleeding hearts.

Chanticleer

Can those in pursuit of romantic oases go wrong at Chanticleer, a 31-acre estate in Wayne, Pennsylvania, that calls itself a "pleasure garden?" Chris Woods, Chanticleer's executive director and lead horticulturist, does not mince words when

he talks about Chanticleer's purpose: to teach people about beauty, arouse the senses, and entertain in a truly theatrical way.

Upon embarking on a walk around Chanticleer's grounds, one senses immediately an aroma of exoticism. The journey begins at a carved gate surrounded by cool Mediterranean walls and heat-loving potted plants, among them a banana tree. Open that gate and you are met by the sparkling elegance of a courtyard garden whose centerpiece is a huge Italian pot spilling forth the cool water that is perhaps Chanticleer's signature refrain. Another recurring element appears right away, in the courtyard, and that is the magical *Virburnum* variety, *V. plicatum tomentosum*, whose flowers possess the buoyant, fresh shapes one might find in a woodcut by Matisse.

As one leaves the courtyard's gentility behind and begins following the path that flows through all of Chanticleer's acreage, the garden's broader drama unfolds. The summer perennial garden, fastidious on this April day but sure to become more unruly in a month or two, is brightened most by many blue cornflowers. Under a three-tiered arbor rests a hand-made bench, one of many pieces of furniture crafted by gardeners and donated to this public park. Intimate as this seating is however, with its gentle view of summer colors, there are



Above: The heat of the tropics surrounded by cool Mediterranean garden at Chanticleer in Wayne. The 31-acre estate is a "pleasure garden" ideally suited for romantic couples.

Right: The Italian pot spilling forth the cool water that is perhaps Chanticleer's signature refrain. Water, trees, shrubs, grasses all murmur along with the couples who want to escape the daily hurly burly.



even more transporting sights waiting on the path.

A short distance from the perennial beds and nearby produce gardens appears a shaded little basin, bisected by a stream and animated by both a waterfall and a great number of absolutely huge hostas. The tropical effect is startling, even though the scale is small; yet it is just this small scale that makes the site alluring. In similar fashion there arise from the path other little anointed areas framed by trees or streams and arrived at by use of miniature wooden bridges. In one such grove young flame azaleas dot the grass and are enclosed by a surrounding forest of old tulip poplars. One can imagine reading poetry here while standing, somehow trying to address these many generations of trees. The saplings in particular lend the grove a beatific air.

Much beyond the azalea grove an innocence prevails along the path, with here a hidden piece of statuary, there a water mill, a duck, a chair made of branches. And then suddenly appears a portent in the form of an immensely fronded herbaceous plant, *Petasites japonicus*, a portent not of greater sweetness but of drama, heat, lushness on a grand scale. What lies ahead is the water garden, a large light-filled site

consisting of two man-made ponds that contain waterfalls and are joyously planted. As a backdrop to the ponds looms Chanticleer's most obvious bow to theatricality, a wooden arbor, giant in scale, that houses a tropical set of "props" befitting a Hawaiian production of *King Lear*. Large gourds hang from the arbor's beams and terra-cotta pots of varying sizes and shapes rest on the stone floor of this seeming stage. All of these details serve only to strengthen the intense power emitted from the stage's focal point — three pairs of outsize wooden thrones, at once rustic and terrifyingly grand. This is Chanticleer, a pleasure garden that startles as often as it soothes.

For real life romance anecdotes set in public gardens, I've turned again to Garden's Collaborative project manager Barbara Klaczynska — the woman known to have penned a list of best places to kiss in Delaware Valley area gardens. The following are two stories of young love,

recounted by Klaczynska.

"Wendy Toman, a graphics designer who works with Historic Bartram's Garden, the nation's first nursery, thought it would be very romantic to bring her husband Dave there soon after they were engaged. This would not have been unusual except Wendy and Dave decided to travel to Bartram's southwest Philadelphia locale on the Schuylkill River via their canoe, along with their dog Cornelius. They arrived safely at Bartram's, walked in the garden together, and embarked in their canoe for their return trip. What Wendy and Dave did not realize was that the Schuylkill is tidal, and upon their return to Center City they were stuck in the river with a six-foot wall of mud that kept them from moving. Fortunately, a policeman saw them and sent help to take Wendy, Dave, Cornelius and the canoe safely out of the water. Undaunted, Wendy and Dave still came back to Bartram's for their wedding, which in spite of 95° F June day, was proclaimed by the guests the most

More About the Romantic Gardens of the Delaware Valley

Since 1981, the public gardens, university arboreta and historic houses with gardens have been working together in the Philadelphia-Wilmington area to encourage visitors to learn about their gardens, visit them and support them. Working as the Gardens Collaborative, these gardens have produced publications, special events and Philadelphia Flower Show exhibits.

The Gardens Collaborative's most recent publication is the colorful *Paradise Presented: Beautiful Gardens in Philadelphia and the Delaware Valley*. Thirty different gardens are featured in this beautifully illustrated 80-page book. The book comes with a guarantee that you will learn more about public gardens in the region, find new ones to visit and even discover some romantic places to call your own. You can purchase the book at any of the Gardens Collaborative member institutions, at local book stores, or by mail for \$7.95 through The Gardens Collaborative, 9414 Meadowbrook Avenue, Philadelphia, PA 19118; (215) 247-5777, Ext. 207, 175.

For Lovers — The Gardens Collaborative Director Recommends:

The American College Arboretum — Romantic dedications dot pathways and inscribed benches at this Bryn Mawr site. 270 S. Bryn Mawr Ave., Bryn Mawr, PA 19010; (610) 526-1228 or (610) 526-1100.

Awbury Arboretum — A northwest Philadelphia arboretum featuring meadows and ponds equal to any country site. The Francis Cope House, One Awbury Road, Philadelphia, PA 19138; (215) 849-2855.

Bowman's Hill Wildflower Preserve — This 100 acres of rolling hillside in Bucks County, Pa., is bisected by Pidcock Creek and is comprised of the meadows, forests, springs, dry uplands, and man-made habitats on which more than 800 species of wildflowers, ferns, trees, shrubs and vines grow. Washington Crossing Historic Park, P.O. Box 685, New Hope, PA 18938. (215) 862-2924

The Grange Estate — Nestled in a Haverford Township hillside overlooking Cobbs Creek, the Grange is one of the many notable county seats surrounding Philadelphia. The exquisite mansion and festive perennial and annual plantings have been the backdrop for many lovely weddings. Myrtle Ave & Warwick Rd., Havertown, PA 19083; (610) 446-4958.

Hagley Museum and Library — Among industrial ruins and restorations, this park-like museum located on the Brandywine, offers more than 240 acres of history and beauty in any season. Route 141, Wilmington, DE 19087; (302) 658-2400.

The Highlands Mansion & Garden — A Fort Washington estate that boasts a secret garden surrounded by a spectacular pink stone wall reminiscent of a medieval castle. 7001 Sheaff Lane, Ft. Washington, PA 19034; (215) 641-2687.

Historic Bartram's Garden — Historic southwest Philadelphia house and garden has a new wetland area perfect for picnicking and viewing the Philadelphia skyline. 54th St. & Lindbergh Blvd., Philadelphia, PA 19143; (215) 729-5281.

Historic Fallsington, Inc. — The Bucks County village of Fallsington is a beautiful destination all year long, displaying the herb, flower and vegetable gardens of private homes as well as the town's museums. 4 Yardley Ave., Fallsington, PA 19054; (215) 295-6567.

Japanese House and Garden — Located in Philadelphia's Fairmount Park, this garden is beautiful throughout the year but on rainy summer days it can best be appreciated by lovers as they gaze out from the house onto the garden looked over by the Buddhist deity Jizo. North Horticultural Drive at Montgomery Drive, Philadelphia, PA 19131; (215) 878-5097.

Jenkins Arboretum — A naturalistically designed arboretum proud of its early spring plantings particularly woodland wildflowers, azaleas and rhododendrons. Elisabeth Phillippe Jenkins Foundation, 631 Berwyn-Baptist Road, Devon, PA 19333; (610) 647-8870.

Longwood Gardens — This Kennett Square treasure recalls the great pleasure gardens of Europe combining horticulture, architecture, theatre and music into a unique garden experience. Route 1, P.O. Box 501, Kennett Square, PA 19348; (610) 388-1000.

Medford Leas — The Lewis W. Barton Arboretum and Nature Preserve — Located in Medford, New Jersey, this 160-acre arboretum contains landscaped grounds, courtyard meadows, natural woodlands and wetlands. Route 70, Medford, NJ 08055; (609) 654-3000.

Rockwood Museum — A great winter retreat, an English country house, located in Wilmington, Delaware, features a cast-iron conservatory filled during the winter with Victorian period flora. 610 Shipley Road, Wilmington, DE 19809; (302) 761-4340.

Scott Arboretum of Swarthmore College — Outstanding collection of specimen plants, also features rocks inscribed with lovers' names at this small college, often called the 'Quaker matchbox.' Swarthmore College, 500 College Ave., Swarthmore, PA 19081; (610) 328-8025.

The Henry Shmieder Arboretum of Delaware Valley College — This Doylestown arboretum encompasses Delaware Valley College's entire main campus. A self-guided tour will take you through the Lois Burpee Herb Garden, the woodland walk, the winter walk, the 1920's cottage garden, the Jean Work Garden and Centennial Landscape which showcase ecologically sound design and the integration of native plants into the landscape. 700 E. Butler Ave., Doylestown, PA 18901; (215) 489-2283.

Tyler Arboretum — Located in Media, this 650-acre arboretum features sequoias, fragrance gardens, butterfly gardens, and bird gardens all naturalistically planted. 515 Painter Rd., Media, PA 19063; (610) 566-5431.

Wyck — This Germantown mansion has a very large collection of old-fashioned roses that bloom from mid-May through June and emit unforgettable fragrances. 6026 Germantown Ave., Philadelphia, PA 19144; (215) 848-1690.



Undaunted, Wendy and Dave still came back to Bartram's for their wedding, which in spite of a °95 F June day, was proclaimed by the guests the most beautiful wedding ever.

photo supplied by Historic Bartram's Garden

beautiful wedding ever.

The second story concerns two young people, beer, a distant sculpture and the annual horse race at Winterthur Museum, Garden and Library that drew these ingredients together to create romance. Winterthur's garden is part of the 1,000-acre estate of the late Henry Francis du Pont, a cattle tycoon who was most passionate about horticulture, and azaleas in particular. Blazing with every possible azalea in May, the Winterthur estate hosts a horse race each year around Mother's Day. It was at this race that Becky Knapp and Chris Adams met. Today they're married. As the story goes, Becky, with the assurance of a true iconoclast, chose to serve up some unusual fare at the race's tailgate party. While others were offering caviar served on fine china, Becky, the young editor of New York's *Arts and Antiques* magazine, was offering her homemade beer served on a wobbly table. Chris, who is a school teacher, saw Becky, the beer, her old Jeep, and fell in love. In reminiscing about this first meeting Becky recalls the sight of distant statuary hidden on Winterthur's grounds. As the two sat on a patch of grass, gazing at the far off sculpture, each teased the other about the piece's identity. No doubt a metal deer will always invoke memories of new romance for this pair of New Yorkers.

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That is the gift a garden offers people seeking romance — an endless supply of details, some obvious, others not, that proffer a meaning only the couple itself can fully appreciate. About 10 years ago, when my husband and I were newly in love, we visited Longwood Gardens on a fall day and passed a giddy hour not trysting in the garden's medieval tower, but jumping on the mounds of pine needles that lay next to it. And though not in flower, the large public rose garden became our private ballroom.

Primal enough to suit passion, yet manicured enough to offer comfort, gardens have always inspired intimacy. And, as is the case with love, their beauty transcends the change of season.

Olivia Lehman gardens and writes in Narberth, Pa. with her husband and two children

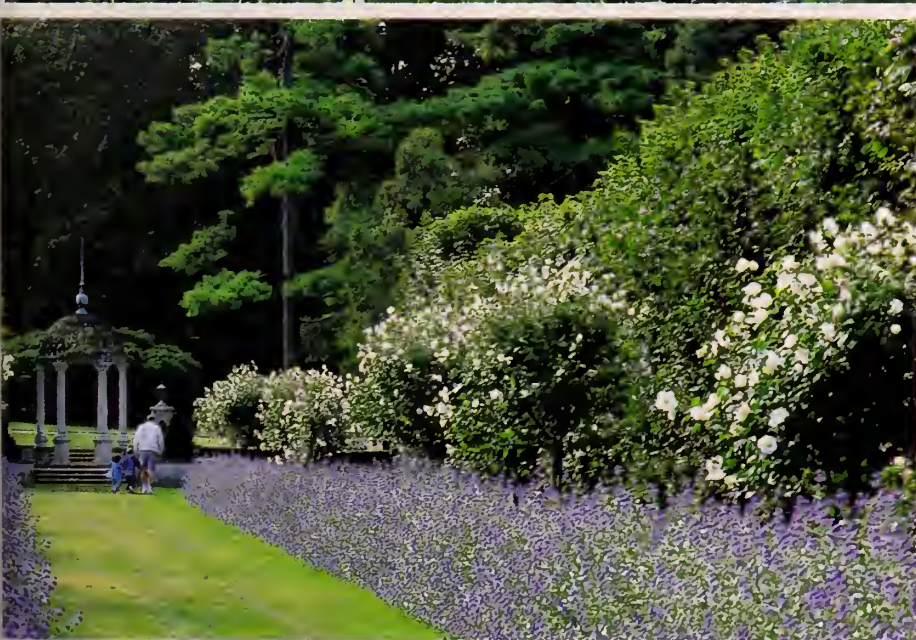


photo by Larry Albee/Longwood Gardens

Top: Historic Bartram's Garden gently rises from the Schuylkill River; people wanting to escape the City's frenetic pace can find solace in the delightful fragrant Common Flower Garden in front of the 18th century Bartram House. The Common Flower Garden abounds with foxglove, delphinium, coreopsis and pinks. **Bottom:** Love Temple at Longwood Gardens, Kennett Square, Pennsylvania.

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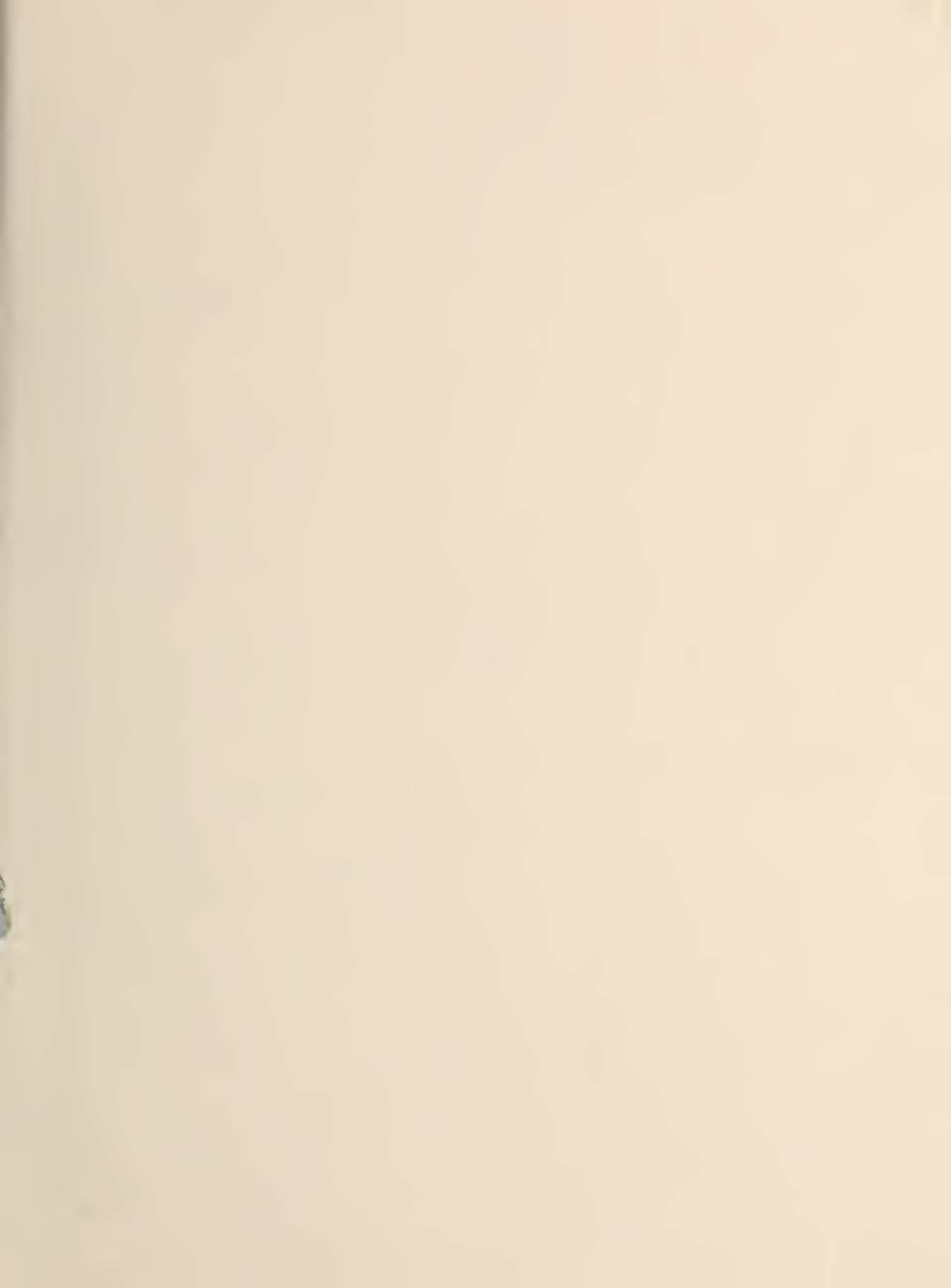
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